June 12, 1961

RAILWAY AGE WEEKLY

SPECIAL: REPORT FROM SUPERINTENDENTS......

NYC INTRODUCES NEW FLEXI-VAN DESIGN

CPR SPEEDS DATA FLOW
WITH TAPE

THREE WAYS TO BOOST FREIGHT TRAFFIC

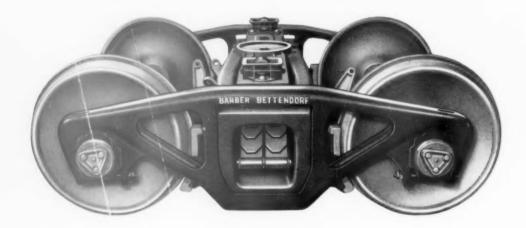
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RAILWAY AGE

WEEK AT A GLANCE

June 12, 1961 . Vol. 150, No. 24

REA introduces 'cube' rate

The "radical" new tariff for small shipments discards the weight-times-distance method of

Superintendents probe terminal tie-ups

An AARS committee which studied the problem came up with no pat answers—but suggested several areas where improvements can be made p.13

NYC introduces new Flexi-Van design

The so-called Mark III Flexi-Van system involves a new type of lighter and cheaper car, a different loading concept, and new king-size containers p.16

Pushbutton plant thaws coal cars

The oil-fired facility, built for an electric-generating plant of the Baltimore Gas & Electric

CPR speeds data flow with tape

A tri-directional tape converter is used by the road to quickly prepare information received

GE expands universal diesel line

The 600-hp U5B now becomes the smallest of the company's universal locomotives. The other

Martin outlines transport goals

The undersecretary of commerce for transportation says his office will move swiftly to translate previous transport studies into "action programs" p.40

Departments

| As the Publisher Sees It |
|----------------------------|
| Current Railroad Questions |
| Freight Carloadings |
| New Equipment |
| New Products Report |
| Operation Speed-Up |
| People in the News |
| Railroading After Hours |
| Railway Market |
| Supply Trade |
| The Action Page |
| Transport Trends |
| Watching Washington |
| You Ought to Know |

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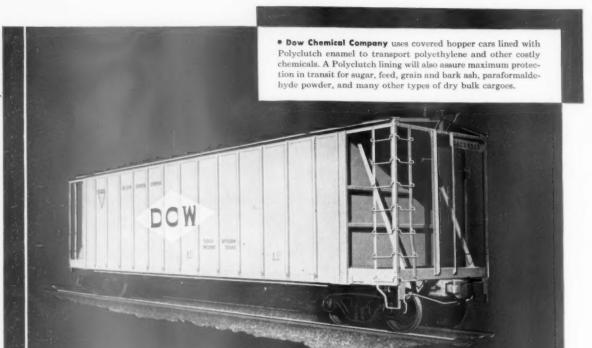
· Washington 4, National Press Bldg.

. The Hague, Netherlands

International Editor......Gordon Huffines



Railway Age, established in 1856, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published weekly by the Simmons-Boardman Publishing Corporation 440 Boston Post Road, Orange, Conn. Second-class postage paid at the Post Office at Orange, Conn. James G. Lyne, chairman of the board; Arthur J. McGinnis, president and treasurer; Duane C. Salisbury, executive vice president; George Dusenbury, vice president and editorial and promotion director; Robert G. Lewis, Joe W. Kizzla, M. H. Dick, M. J. Figa, vice presidents.



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RAILWAY AGE

WEEK AT A GLANC

Phillips buys 30,300-gal. tank cars

Built by General American, the cars are 19 ft shorter than other large-sized models but dia-

Computer dispatching role aired

How digital computers can help the train dispatcher—particularly in the rapid-transit field

The Action Page—Three ways to boost freight traffic

Railroads must provide large-volume movement at lower rates, accelerate the extension of piggyback and container service, and intensify their rate-reform program p.46

Short and Significant

Continuance of D&RGW's Silverton branch

has been recommended by an ICC examiner as a matter of "public convenience and necessity" during the summer. The narrow-gage line is a Colorado tourist attraction.

Increased carloadings are in prospect...

as a result of a combination of factors—a normal seasonal upturn and improvement in general business conditions—says the AAR's Car Service Division.

An expected increase in business ...

was one factor in N&W's decision to order 30 new diesels, says President S. T. Saunders. He noted that N&W will pay cash for the \$5,750,000 order (see page 39).

A 'Four Freedoms' special ...

made a three-day, 800-mile swing through Michigan last week to publicize the railroads' "Magna Carta" plea. Top officers of Michigan railroads were aboard the train.

Current Statistics

| Operating revenues |
|------------------------------|
| 3 mos., 1961 \$2,128,831,304 |
| 3 mos., 1960 2,411,781,592 |
| Operating expenses |
| 3 mos., 1961 1,781,378,954 |
| 3 mos., 1960 1,913,520,598 |
| Taxes |
| 3 mos., 1961 228,698,551 |
| 3 mos., 1960 266,396,272 |
| Net railway operating income |
| 3 mos., 1961 |
| 3 mos., 1960 147,036,382 |
| Net income estimated |
| 3 mos., 1961 Def. 13,000,000 |
| 3 mos., 1960 99,000,000 |
| Carloadings revenue freight |
| 21 wks., 1961 10,731,464 |
| 21 wks., 1960 12,627,419 |
| Freight cars on order |
| May 1, 1961 13,658 |
| May 1, 1960 41,003 |
| Freight cars delivered |
| 4 mos., 1961 12,280 |
| 4 mos., 1960 19,429 |
| |
| |

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Railroad employees' subscription rate: in U. S. possessions, Canada and Mexico, \$4 one year, \$6 two years, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, \$10 a year. In other countries, \$15 a year. Single copies 60¢ except special issues. Address all subscriptions, changes of address and correspondence concerning them to: Subscription Dept., Railway Age, Emmett St., Bristol, Conn.

Change of address should reach us three weeks in advance of next issue date. Send old address with new, enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Circulation Dept.: W. A. Cubbage, Circulation Manager. 30 Church St., New York 7, N. Y. POSTMASTER—SEND FORM 3579 to EMMETT ST., BRISTOL, CONN.

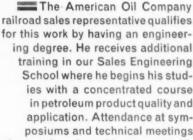
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REA Introduces 'Cube' Rate

► The Story at a Glance: REA Express has taken what it calls a "radical" step in rate-making with the introduction of an experimental "cube" rate for small shipments. Discarding the conventional weight-times-distance method of computing freight charges, the new rate is based on (1) the number of pieces comprising a shipment, and (2) total cubic volume. It's designed to trim costs for both carrier and shipper.

A major plank in REA's "reform platform" two years ago was a promise that rates would be drastically overhauled. Last week, REA Express capped a series of rate innovations with the most revolutionary change yet—a "cube" rate based on space occupied, rather than weight.

The new tariff—REA No. 39—became effective June 7, covering china and earthern tableware shipments from Syracuse, N. Y., to all U.S. express points. Studies are already under way with a view to extending the new concept to other commodities and other areas.

As REA sees it, the cube rate could "revolutionize shipper practices while attacking fundamental causes of the nation's small shipments problems."

The new rate—which is published as Section 2 of the tariff—is determined by a combination of two elements: the number of pieces and the total cubic volume of the shipment. (Section 1 publishes charges based on the conventional weight-times-distance concept for comparative purposes and for any shipper desiring to use them.)

Shipment piece count charge is determined from a simple one-page schedule. Cubic line haul charge is determined from a table based on a fixed charge of seven cents a cubic foot per 100 miles.

As REA explains it, the cube rate means that "the greater the density and the fewer the pieces the shipper can achieve per shipment, the lower the charges. They will be lower even though the total shipment weight may be the same or more than other shipments moving at higher charges if the latter are bulkier or involve handling a greater number of pieces."

REA pointed out that under conventional commodity rates "a common carrier's charges for shipments of a given nature, weight and distance do not dif-

fer, although the number of pieces and cubic volume of the individual shipments may vary considerably."

REA Express President William B. Johnson noted that the rate will prove advantageous "where the physical nature of the commodity or improved packing practices result in reductions in either or both the total cubic space each shipment requires and the number of shipment pieces that must be handled."

In arriving at the new rate concept, REA took into consideration the following three factors which it says realistically reflect the agency's handling and transport expenses:

• Fixed transaction expense per lessthan-carload shipment, regardless of its characteristics.

• Terminal handling expenses which increase with the number of pieces.

 Total cubic volume or space each shipment requires for its inter-city line haul.

The first two factors are included in the piece charge. This plus the space charge makes up the total rate.

The new emphasis on space, rather than weight, reflects the fact that avail-

able space in express rail cars and highway containers is used up well before maximum weight capacity is reached. Thus, space becomes the principal line haul expense factor.

Net effect of the new rate yardstick, REA believes, will be the encouragement of "more efficient small shipment transport practices by the shipping public, benefiting both the carrier and its customers."

An example of the kind of efficient small shipment practices REA is talking about is its newly-designed express receipt to be used with the cube tariff. Under this, all pricing is done by the shipper-both collect and pre-paid. The shipper-who would presumably figure his costs under the cube rate as compared with other methods of shipment before deciding to use the new rateprovides on the shipping documents the weight, measurements in cube of each package and the amount of charges. REA can verify or audit the charges at any time from the shipping documents. By eliminating separate paperwork by its personnel. REA cuts the cost of the shipment.

Sample 'Cube' Rates

Under REA's new cube rate tariff, hypothetical shipments of 100 and 500 pounds moving 650 miles from Syracuse to Chicago, including pickup and delivery, would be assessed the following total charges depending upon the varying piece and cubic characteristics shown:

100-POUND SHIPMENTS

| COUNT | CHARGE | VOLUME | CHARGE | TOTAL |
|----------|--------|---------|--------|--------|
| 4 Pieces | \$5.00 | 4 Cu.Ft | \$1.80 | \$6.80 |
| 3 Pieces | 4.30 | 4 Cu.Ft | 1.80 | 6.10 |
| 3 Pieces | 4.30 | 3 Cu.Ft | 1.35 | 5.65 |
| 2 Pieces | 3.20 | 2 Cu.Ft | .90 | 4.10 |

500-POUND SHIPMENTS

| COUNT | CHARGE | VOLUME | CHARGE | TOTAL |
|-----------|--------|----------|--------|---------|
| 12 Pieces | \$9.00 | 20 Cu.Ft | \$9.00 | \$18.00 |
| 12 Pieces | 9.00 | 10 Cu.Ft | 4.50 | 13.50 |
| 9 Pieces | 7.50 | 20 Cu.Ft | 9.00 | 16.50 |
| 9 Pieces | 7.50 | 10 Cu.Ft | 4.50 | 12.00 |
| | | | | eu. |

New Rapid Transit Institute Formed

The Institute for Rapid Transit has been formed as a nationwide organization to promote development, expansion, and modernization of rapid transit in metropolitan areas. The non-profit institute, launched in Philadelphia last week, will have headquarters in Chicago's Merchandise Mart. It replaces the Transit Research Corp., which was formed in the early 1930's to develop a modern streetcar.

Charter members of the institute are the Boston Transit Authority; the Chicago Transit Authority; the Cleveland Transit System; the Pittsburgh Railways Co.; the Toronto Transit Commission; General Electric Co., Schenectady, N.Y.; General Steel Castings Corp.,

Granite City, Ill.; Pullman-Standard Car Manufacturing Co., Chicago; St. Louis Car Co.; Westinghouse Electric Corp., East Pittsburgh, Pa.; and Westinghouse Air Brake Co., Wilmerding, Pa.

The institute says its objectives are to promote and coordinate technological advances in rapid transit equipment and facilities; to collect, analyze, and distribute data on technologies and developments pertinent to the progress of rapid transit; to cooperate with the American Transit Association in matters concerned with rapid transit; to maintain liaison with planning and other organizations; to serve as spokesman for the rapid transit section of the transportation industry; and to

study rapid transit planning, and coordination of rapid transit and suburban railroad planning, if requested.

Officers of the institute are Walter J. McCarter, general manager of Chicago Transit Authority and former president of TRC, president; Donald C. Hyde, general manager, Cleveland Transit System, vice president and treasurer; and David Q. Gaul, former engineer for TRC, executive secretary.

Directors are J. G. Inglis, general manager, Toronto, Ont., Transit Commission; T. J. McLernon, general manager, Metropolitan Transit Authority of Boston; C. D. Palmer, president, Pittsburgh Railways Co.; Mr. McCarter and Mr. Hyde.

WATCHING WASHINGTON WITH WALTER TAFT

• REALISTIC APPROACH to competitive ratemaking is reflected in a proposed report by ICC Examiner T. Russell Roper. The report, in No. 33392, advises the Commission to approve Plan III piggyback rates on new automobiles and trucks moving from Cleveland, Detroit and Lorain to New England and Trunk Line territories.

THE OUT-OF-POCKET BASIS is accepted by the examiner as the "applicable cost test." That's the position of the railroads. They contend that fully-distributed costs have no proper role in competitive rate cases.

THE NEXT TEST, as the examiner puts it, is whether a competitive rate, cleared as covering out-of-pocket costs, is "just and reasonable" in the sense of making the greatest possible contribution to overhead. The proposed report goes on to suggest that competition of other modes of transportation may be so intense as to justify fixing the "minimum reasonable basis" as low as the out-of-pocket level.

TRAFFIC AT STAKE in the case is high-grade. In appraising the proposed rates on the contribution-to-overhead basis, the examiner advises the Commission to bear in mind that traffic, however high-grade, which railroads lose to truckers and water carriers "makes no contribution whatever to rail income and the other rail traffic has an even greater burden."

ONE BOW to the value-of-the-commodity factor is made by Examiner Roper. He recommends that, on vehicles weighing 4,500 lb or more, the rates be made 17.5% higher than the proposed rates which he would

have the Commission approve for vehicles of lesser weights. He would not apply this differential, however, if the proposed rates and other Plan III shipping costs on the 4,500-lb vehicles exceed corresponding charges of shipping by truck or truck-boat.

• ANTI-SHORT-HAULING CLAUSE of the Interstate Commerce Act's through-routes provision protects the long haul of railroads over routes which include separately-operated lines they own jointly. The United States Supreme Court has so ruled in upholding the ICC's refusal to require the Spokane, Portland & Seattle to extend to the Milwaukee the same Spokanegateway arrangements it provides for its owners—the Great Northern and Northern Pacific.

THE CLAUSE which the court interpreted is in the Act's Section 15(4). It stipulates that, in the absence of a special showing of need, no railroad shall be required to join a through route which embraces substantially less than the entire length of its line and the line of any intermediate railroad "operated in conjunction and under a common ownership or control" with it.

THE COURT'S DECISION interpreted the quoted phrase for the first time. Though the clause "is framed in the singular," as it said, the court nevertheless rejected Milwaukee's contention that protection for a controlled road applied only if that road had but one owner. Relying on the legislative history of the section, and on Commission rate decisions of like import, the court determined that Congress considered the protection "as valid and necessary in the case of two railroads owning a third as it is when only a single railroad and its subsidiary are involved."



Performance Report of General Electric's New U25B on the Great Northern

5459 TONS-164 MILES-AVG. 41 MPH

SERVICE HISTORY—As part of a demonstration program on major U.S. railroads, two General Electric U25B locomotives, like those above, recently completed 5588 miles on the Great Northern Railway, hauling a total of 312,498,000 gross ton-miles between Union Yard in the Twin Cities and Whitefish, Montana.

SCHEDULE PERFORMANCE—Fewer units powered the Great Northern's high-speed mainline freight service and still maintained established schedules with the U25B locomotive's 2500 hp on four axles. A typical run showed these results:

New Rockford, N. D.—Breckenridge, Minn., 164 miles. 0.3% ruling grade
Two U25B's—80 loads, 10 empties, 5188 trailing tons, 5459 gross tons, 164 miles

Elapsed time 4'00"

-41.0 mph average

Balance Speed

-34.5 mph on + 0.3%

GTM per train hour

-223,819

GREAT NORTHERN COMMENTS—THE CENTRAL-DUCT AIR SYSTEM supplied abundant clean air throughout the locomotive, even in a dust storm at Lothair, Montana. A later routine check found the electrical equipment as clean as when installed. Particularly noted by the enginemen: the few wheel slips that occurred were quickly corrected by automatic momentary application of independent brakes.

THE U25B UNITS rode well under all track and speed conditions. The turbocharged engines operated with clear exhaust stacks at all loads and altitudes.

The two units multipled well with other motive-power units.

LUBE-OIL CONSUMPTION was low; fuel consumption proved favorable during the Great Northern testing period.

For information on how G.E.'s performance-proved U25B can cut operating costs and build new profits for your railroad, contact your General Electric Sales Engineer.

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... reading Railway Age is a fixed Monday morning habit with me, and has been throughout my railroad career. It is invaluable in keeping one abreast of developments in the industry."

Harry A. De Butto

How to Reduce Terminal Tie-Ups

► The Story at a Glance: The inseparable problems of maintaining dependable service and reducing terminal tie-ups got renewed attention last week as the American Association of Railroad Superintendents launched into its annual no-holds-barred discussion of railroad operating conditions,

The superintendents had no pat answers to these hardy-perennials among operating problems. But, they agreed, the changing nature of industrial production practice—particularly the tendency to view the transportation function as an extension of the production line—makes dependability mandatory. Increases in over-the-road speed are laudable, AARS committees pointed out—but more efficient use of terminal facilities and more custom-tailoring of schedules to shipper-receiver needs may lie even closer to the core of the problem.

Over the past two decades, railroads have made significant increases in average freight-train speed, in average number of cars per freight train and in average train load. Still, it seems to take just as long to move a car from origin to destination. There's been an actual decrease in miles moved per day per loaded car—and, between 1940 and 1957, the car movement ratio (time in road haul vs time in terminals) has slipped appreciably. In 1940, the average car spent 26.9% of its day in road-haul movement. By 1957, the ratio had fallen to 23.8%.

Or, as an AARS committee headed by E. B. Hardwig (superintendent, Alton & Southern) noted, "it's quite apparent that the time saved by longer and faster trains has been absorbed by terminal detention. If this is true, it is indicative that most of the technological improvements made by the railroads . . . have merely permitted us to hold the line on the overall time it takes to move a car from origin to destination."

With the "inventory revolution" brought about by industrial expansion during the past 20 years, the committee added, "dependable service is becoming more and more essential to shippers and receivers, principally because progressively greater competition compels maximum efficiency and economy in their operations. Consistent, dependable arrival times for shipments have become an important element in railroad service because the movement of raw

materials and supplies must by synchronized with inventory controls and production schedules. Inconsistent and delayed movements mean actual cash out of our patrons' pockets and cause them to investigate—and possibly adopt—other methods of transportation, even if the actual transportation costs are somewhat higher."

The committee suggested four principal areas where terminal improvements could promote both dependability and speed:

- Further vard mechanization.
- Installation of additional facilities to improve communications.
- More effective use of manpower, through better training and better organization of operations.
- Better planning of classifications, to enable pre-blocking wherever possible.

A further look at dependability—and particularly at its relationship to costs—came in a report from a group headed by R. E. McMillan, assistant

to the president, Chicago & Eastern Illinois.

The committee conceded that cost is basic to the provision of dependable service. But, it warned, cost-based decisions affecting service "should never overlook the jeopardy value of losing the traffic concerned. It has not been traditional with operating supervision to evaluate the factor of loss jeopardy. Changing times will not countenance neglect."

The committee also frowned on the application of "pressure on supervision to reduce costs arbitrarily, without leaving discretion to local officers to balance dependability with measures of established goals set by a central office. Accomplishment of directives to reduce engine hours or overtime disregards performance satisfactory to patrons. Directives should be carefully scanned locally and [should be] based on reliable cost and revenue data."

As for the actual scheduling of train movements, the group pointed out,

How Efficient Is Your Organization?

Here's a five-point check-list for measuring organizational efficiency, as set up by AARS Subject Committee No. 2, headed by E. A. Temple, vice president—operations, Ashley, Drew & Northern:

- Organization—Have you an organization manual, defining personnel functions, authority and responsibility? Is the organization charted for easy grasp by all concerned? Have work standards been put in writing? Are the manual, chart and standards current?
- Personnel—Have you a policy for selection, placement and advancement training of all personnel? Are communications effective?
- Planning—How much of your operation and practices is based on guesswork and impulse and how much on data and the judgment of your staff? Are plans definitely stated and understood by those who are to carry them out?
- Control—Do you recognize that control figures are a check on operating efficiency and a help to prompt corrective action? Do you have an individual assigned the responsibility for proper and accurate preparation of control reports or graphs?
- Facilities—Do you have proper facilities necessary to attain your objectives? And if you don't, does your organization structure provide for prompt, orderly acquisition of needed facilities?

"each important destination or forwarding point has its acceptable hours for freight handling. Schedules, therefore, require custom fitting to meet these needs. Obviously, such attention will mean more and shorter trains. This appears to be the price railroads will have to pay to stop attrition of traffic to competitive transportation," the committee said.

Mr. McMillan's group also noted that dependable (and realistic) scheduling requires the close cooperation of traffic and operating departments"from the former so that they will not attempt to sell something which the transportation department is unable to produce, and from the latter so that they will understand the importance of and make every effort to make advertised schedules and, equally as important, delivery of cars within terminals."

Road-haul speed is fine, the committee concluded—but "speed in bursts is worse than no speed at all. If we are to stem the tide of traffic loss, we must produce reliability and speed—in that order. A shipment delivered a day too

early often creates as much dissatisfaction as one delivered a day too late. Our mutual performance goal: on-time

Other reports presented to the AARS session in Chicago included a review of piggyback and containerization developments by a committee headed by J. P. Ascher, supervisor transportation engineering, Pennsylvania; and a study of effective safety action by a group headed by J. A. Bonelli, assistant superintendent of transportation, Pennsylvania.

Needed: 'Freedom to Be Efficient'

Addresses by Canadian National and Canadian Pacific officers and by AAR's vice president—operations highlighted the "working convention" of the American Association of Railroad Superintendents in Chicago last week.

Stressing that the cooperation among railwaymen in Canada and the United States is a "manifestation of the economic inter-dependence of the the two countries, R. A. Emerson, vice president, CP, declared that this community of interest also embraces common problems.

He asserted that the economies of both Canada and the United States have failed to keep pace with other countries,

He related the current crisis in the transportation industry to the failure of both Canada and the United States to keep pace with the economic growth of other countries. "The transportation problem is to some extent symptomatic of the problems of the whole economy and is due in part to similar underlying causes."

In making a plea for the "freedom to be efficient," the CP vice president said: "We are quite prepared in com-

mon with other industries to take our chances under competitive conditions on an equal footing with other transportation media. We are quite prepared to adjust our operations and facilities where we cannot be truly competitive as to both price and service."

Mr. Emerson feels that the present crisis in the transportation industry stems partly from governmental participation in the realm of transportation. "Efficient low-cost transportation provided by private enterprise under the discipline of the market tends to be replaced by less efficient, higher cost transportation provided by the state, the cost burden of which is buried and concealed by the intricate maze of the tax structures of our governments."

Regulatory restrictions affecting the ability of the railroads to offer truly competitive rates and requirements affecting operations of railroads in both Canada and the United States imply that "railroad management is incapable of managing." Mr. Emerson finds this "patently ridiculous."

Organized labor also came in for its share of criticism for the part it has played in precipitating today's transpor-

tation crisis. Mr. Emerson finds railroad union leaders "above average in maturity and responsibility" but he feels that "union leadership has exhibited tendencies towards short sightedness and selfishness which fail to serve the true interests of the employees they represent as well as the railroads who provide the jobs upon which the common interest of employer and employee depends. Demands of labor unions which preempt all of the gains in productivity and improvements in efficiency brought about by prodigious efforts of management and large outlays of capital funds cannot but undermine the whole foundation of the industry."

J. R. McMillan, vice president, Prairie Region, Canadian National, in an address which opened the 65th Annual AARS meeting, urged "the most important group of officers in the railroad industry" to meet effectively the challenge of "continued enthusiasm, constant quest for ways to do the job better, loyalty to your company and faith in the future."

Mr. McMillan said that technological advances only provide tools to produce the results that management has a right to expect. "The greatest need still is for line officers with enthusiasm, inventiveness, initiative, loyalty and leadership to take these tools and use them in such a way as to extract every last bit of the economy and efficiency for which they were designed."

He stressed also the importance of the human element and the building of morale.

Mr. McMillan also views the superintendent as "the best public relations officer a railroad can have."

C. D. Buford, vice president—operations. AAR, who headed a delegation of railroad officers on a tour of Soviet railroads last year, contrasted the role of the superintendent in America with his counterpart in the USSR.

UP's Groome Heads AARS

W. B. Groome, UP superintendent, Los Angeles, was elected AARS president to succeed A. J. Cowie, CP superintendent, Regina, Sask. Vice presidents chosen at the Chicago meeting are B. G. Nash, assistant regional manager, C&O; K. E. Miller, general superintendent, transportation, D&H; A. J. Powers, superintendent of rules, New Haven; W. W. Weber, superintendent of transportation, Chicago South Shore & South Bend. Treasurer H. L. Kimble, assistant superintendent of transportation, PRR, Altoona, Pa., was reelected to that post.

Elected to three-year directors' terms

are C. C. Eldridge, assistant to superintendent of transportation, WP; T. Parker, Jr., director of personnel administration, CofG; J. A. Bonelli, assistant superintendent of transportation, PRR, Youngstown, Ohio. E. C. Harvey, general superintendent, Belt Railway of Chicago, will fill a one-year term.

AARS members approved two executive council proposals aimed at broadening its membership base and a proposal authorizing appointments to council vacancies occurring between annual meetings. The proposed by-law amendaments will be submitted for final approval at the next annual meeting.

What Are Passenger Questions?

For Railway Age's annual passenger traffic issue, which appeared on May 15, we invited readers to write us with questions concerning passenger traffic they would like to see discussed. Here are some responses to our query that were received too late to be included in the May 15 issue. There will be more on this subject in subsequent issues—Editor.

To the Question and Answer Editor:

In connection with the several questions [RA, May 1, p. 38] that are appropriate to our line: Reduced roundtrip coach fares have produced additional net revenue for us but it has been true only in connection with the longer trip-type business. Our reduced fares are in effect from May 1 to November 15 between Eastern points, including Richmond and Florida. These 30-day round-trip coach and unrestricted tickets offer a saving of 25% below double one-way fares and July is the biggest passenger business month in the year for us.

The same type of experiment in intermediate territory was not profitable, however, as we could not obtain enough additional passengers to offset the fare reduction.

Five years ago we reduced our dining car prices without making any reduction in the quality of food or service. As a matter of fact, we added fresh flowers in the diners and introduced our "Hospitality Hour" when we serve complimentary orange juice and coffee in the dining cars between 3 and 4 p.m. on all our streamliners. Our top dining car price is \$4.75 for a full course large charcoal-broiled sirloin steak dinner. Our objective was first of all to get more passengers on the train to use the dining car service; secondly to attract more people to the trains. We believe both have been successful.

—J. R. Getty, general passenger traffic manager, Seaboard Air Line.

To the Ouestion and Answer Editor:

Following are two questions concerning passenger traffic which might be worth future examination in Railway Age.

(1) The customers of rail freight service are largely industries. Rail passenger service, on the other hand, is essentially a consumer industry. Can industrially oriented and trained freight sales executives do an effective overall job of supervision over the development and marketing of a consumer service?

(2) From a practical business standpoint with profit as the objective, what costs should be considered for evaluation of the present worth and future potential of passenger service:

• "Out-of-pocket" costs? (They

A forum for railroaders who want to explore questions of importance to their industry, this department welcomes both questions and answers from readers at all levels of responsibility in the industry and associated fields. We'll pay \$10 to any reader submitting a question that forms the basis for a column discussion. Address correspondence to Question and Answer Editor, Railway Age, 30 Church St., New York 7, N. Y.

don't include selling costs, depreciation of equipment, and some directly related supervisory, operating and maintenance expense.)

• Fully allocated costs? (They do include general expense, much M/W expense and other items which would not vary with elimination of the service.)

Something in between, and, if so, what?

The latter question especially seems to me to be one that deserves extensive examination. Thorough and objective consideration of it could be a real service to our industry.

[These questions were submitted by a passenger traffic manager who prefers not to be otherwise identified.]

Why Not More Sales Promotion Aids?

To the Question and Answer Editor:

Why is there not more sales material available to help promote rail traffic? I would like to see Railway Age publish some sales talks that could be memorized and used by rail enthusiasts, whether or not they are directly employed in sales or traffic departments. Whether you like canned speeches I don't know, but you probably know that many traffic men are weak salesmen. Many other railroad men would like to sell occasionally but they have no idea what to say. These talks, if published, could contribute a great deal to the railroad cause.

I have studied sales courses and read many salesmanship books, but I have not found any that are particularly helpful in rail traffic. If you could give reference to some helpful material, that, too, would be a splendid thing.

One of the big difficulties has always been a matter of information about rates, particularly rates of competitors. and particularly for employees not actively employed in the traffic department. Obviously your magazine cannot quote at length from tariffs or rate tables, but it does give a wealth of information that is helpful along this line. In some of your past issues, you have issued quite a challenge for the traffic man to better informed on service and on rates, both of his own company and of his competitors. Anything you can do to promote this cause still further, especially in urging the various companies to give their men the necessary tools for selling, would surely be a sign of progress and would probably pay good dividends.

[This communication is from a railroad station agent who prefers not to be otherwise identified.]

Let's hear from readers who have had experience with this problem. What general sales methods are particularly suitable for use in the railroad industry? What kind of sales tools are helpful? What kind of sales approach should the railroader who is not employed in a sales or traffic department have? What techniques have you found to be helpful?—Editor.

NYC Introduces New 'Mark III' Flexi-Van Design



► The Story at a Glance: Flexi-Van, the container piggyback system introduced by the New York Central in 1958, is getting a new look. First public demonstration of N .rk III Flexi-Van was made in Los Angeles last month when the Central and United States Freight Co. offered a joint display of the latest developments in cars, tractors, and containers. The California shippers' group for whom the demonstration was staged saw lighter and cheaper cars of new design, a different loading concept, and new "king-size" Flexi-Van containers.

The New York Central is receiving 25 Flexi-Van cars of a new design called "Mark III." The Mark III Flexi-Van system involves a new type of car, plus a special yard tractor for loading and unloading.

West coast shippers, including representatives of growers, packaging firms and freight forwarders, were at a Los Angeles demonstration where the Central and U.S. Freight, with the cooperation of the Southern Pacific, showed the latest Flexi-Van developments.

In Los Angeles, NYC President A. E. Perlman called the new Flexi-Van system "the very newest development of applied technology." He pointed out that the car weighs 11,000 lb less than the conventional car and that the new handling system simplifies loading and unloading and also permits operation

in smaller terminal areas.

The new 85-ft Flexi-Van car, like its predecessor, carries a pair of wheelless 40-ft containers. However, the turntables on which the containers ride on the new car are directly over the trucks, about 5 ft from each end of the car. On the predecessor car, turntables were carried between the center-sill beams. about 21 ft from the car ends. Instead of being balanced on the turntables as has been previous practice, the containers are now supported only at their

rear ends by the turntables.

During loading of the Mark III car. the trailer is backed onto the turntable guide rails which slope upward to raise the van from its highway bogies. When the rear of the van reaches the back of the turntable, it is automatically locked in place. This leaves the forward end of the van supported on the fifth wheel of the tractor.

A standard tractor would be incapable of completing the loading from this point. It is now necessary to swing the forward end of the van around until its front end is resting on a locking support on the car's center sill. Alining the van with the car is not done by tractor in the conventional Flexi-Van system. In that, the van is centered and balanced on the turntable and is swung by hand

into its rail-haul position.

Here's how loading is done with the Mark III system. The Central has acquired Ottawa Commando Yard Hustler tractors equipped with a powered nose wheel. The wheel is lowered by a telescoping hydraulic cylinder, which raises the tractor's front wheels off the ground. This gives the tractor a "zero turning radius." It enables the tractor to move from its normal over-the-road position at the front of the trailer to a position at right angles to the front

The tractor rotates about the van's kingpin without moving the front of the van, which is completely supported on the tractor's fifth wheel during the

10-sec operation.

Once the tractor has moved to the position described, the nose wheel is retracted. The van is pushed around until it is adjacent to the car's kingpin receiver on which the forward end of the van rests while in transit on the car. The tractor's fifth wheel is then lowered, leaving the van resting on a "receiving a sort of shelf extending out plate." from the center sill.

Mounted in a universal trunion over the Yard Hustler engine and beside the

cab is a hydraulic transfer cylinder, with a 7-ft stroke, pointing toward the rear. The cylinder pushes the van into its final rail-haul position during loading, and pulls the van on to the tractor's fifth wheel during unloading.

The cylinder can exert a push of 6 tons and a pull of 7.5 tons-both adequate for sliding the forward end of the van to the proper position. The end of the transfer cylinder's piston rod has a ball-mounted spool which slides into a socket casting on the latest Flexi-Vans. It is against this casting that the transfer cylinder pushes. The flange on the spool exerts pull on the same casting for unloading. The transfer cylinder can be moved vertically and horizontally and can be retracted or extended, all with a single control handle in the tractor cab.

Along the nose wheel and transfer cylinder, the Ottawa Mark III tractor is also fitted with a bogie carrier at its rear. This is for spotting bogies before unloading and for moving them around a terminal without tow bars and without the need for coupling air hoses. The three features have all been fitted to the standard 87-hp, short-wheelbase Commando tractor for the Mark III Flexi-Van operation. The Commando's fifth wheel can support and elevate a 40,000-lb kingpin load, giving stability to the van at all heights. It has a remote air unlock for the kingpin and an automatic relock feature.

By incorporating the special equipment on the tractor and by redesigning the turntable arrangement, it is possible with the Mark III system to completely eliminate the hydraulic system which each conventional Flexi-Van car now

carries.

The hydraulic system operates lifts in the turntables to elevate the vans from their rail-haul position during unloading, and to lift them out of the highway bogies during loading. Therefore, the Mark III car is never con-(Continued on page 34)





NOSE WHEEL, lowered to raise the tractor off front wheels, gives the Commando Yard Hustler a "zero turning radius" and the maneuverability for loading Mark III Flexi-Van cars.





TURNTABLE AND KINGPIN LOCK, same Strick parts used on NYC cars, have been applied experimentally to this SP Clejan car.

TRANSFER CYLINDER is operated to bring piston against socket casting on van; piston pushes container to rail-haul position or pulls it to tractor's fifth wheel during unloading.



Train No. 24, a hot-shot freight bound for Chicago, is readied for on-time departure at Shoreham Yards, Minneapolis, The Soo operates 195 diesel units over 4,800 miles of track . . . has developed a diesel maintenance control system that not only insures proper running maintenance but also permits re-scheduling major overhauls on an "as-needed" basis.



(Left to right) Herb Link, Chief Diesel Supervisor, Roy Johnson, Diesel Supervisor, Lines West, and Don Borchert, General Mechanical Superintendent, discuss the Soo Line's maintenance program with Mobil, representative Bill Wilson.



Three simple "go-no-go" techniques are used to check diesel lube oil condition: a Visgage check at controlled temperature, a dirt level check with the Mobil Fotoscope, and a water-content test developed in cooperation with Mobil Engineers.



One of Soo Line's weed spray cars is prepared for approaching season. The Soo's weed control program relies heavily on the use of aromatic oils, such as Agronyl R, supplemented with appropriate chemical applications.

HOW THE NEW SOO LINE MEETS THE CHALLENGE OF MODERN RAILROADING

"To be successful in today's transportation industry, you just can't be satisfied with the status quo" says Thomas R. Klingel, Vice President Operations and Maintenance, Soo Line Railroad. "Here on the new Soo, we're continually and aggressively seeking new ways to make our operations more efficient and economical."

This quote reflects the exciting spirit of—the new Soo. The result of a merger of the Minneapolis, St. Paul & Sault Ste. Marie; the Wisconsin Central and the Duluth, South Shore & Atlantic Railroads, the new Soo is a dynamic and progressive transportation company.

By employing modern computers—promoting "piggyback" service—maintaining strict schedules, the new Soo is combining operating and maintenance efficiencies with aggressive marketing efforts to move ahead in the railroad industry.

Soo management and personnel recognize the part that suppliers, like Mobil, can play in helping them to meet the challenge of modern railroading. As Tom Klingel puts it, "The Mobil Oil Company has contributed to our progress by bringing us new ideas and products for more efficient operation."



RAILROAD PRODUCTS

95 years of helpful association with the Railroad Industry MOBIL OIL COMPANY, 59 East Van Buren Street, Chicago 5, III. • 150 East 42nd Street, New York 17, N.Y.

How Mobil is prepared to help today's railroads meet this challenge!

Mobil lubricants, Mobil diesel fuels, and Mobil experience play a prominent part in the operation and maintenance of railroad rolling stock. Here are some of the ways in which Mobil may be able to help you:

PRODUCT—Mobil products have proven themselves in actual performance on America's leading railroads. They're always of highest quality . . . uniformly consistent.

RESEARCH—Mobil's never-ending research on fuels, lubricants, and refining processes results in continually improved products for you.

SPECIAL PERSONAL SERVICE __Mobil laboratories assist customers with specific problems involving application of products.

ENGINEERING ASSISTANCE — Mobil service men average over 25 year's experience. These men understand not only petroleum products . . . but railroading, too.

TECHNICAL INFORMATION—Mobil freely distributes technical information to interested railroad personnel. Both the pros and cons of technical problems are thoroughly and frankly presented.

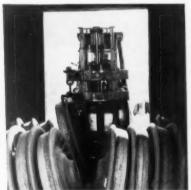
SUPPLY POINTS—Strategic location of 13 refineries and 20 product compounding plants provides convenient supply points.



This Mobil-lubricated track liner can align 1½ miles of track per day including curves. The Soo has long pioneered in the development and use of modern mechanical maintenance-of-way equipment.



After carefully evaluating many track greases, the Soo Line has found Mobil Curve Grease 1105 to be outstanding in respect to carry and low temperature pumpability.



Wheel hook, operated from the lift-truck cab, was developed by Soo personnel. Its use speeds unloading of wheels, reduces handling costs, and increases safety—an example of Soo Line ingenuity.



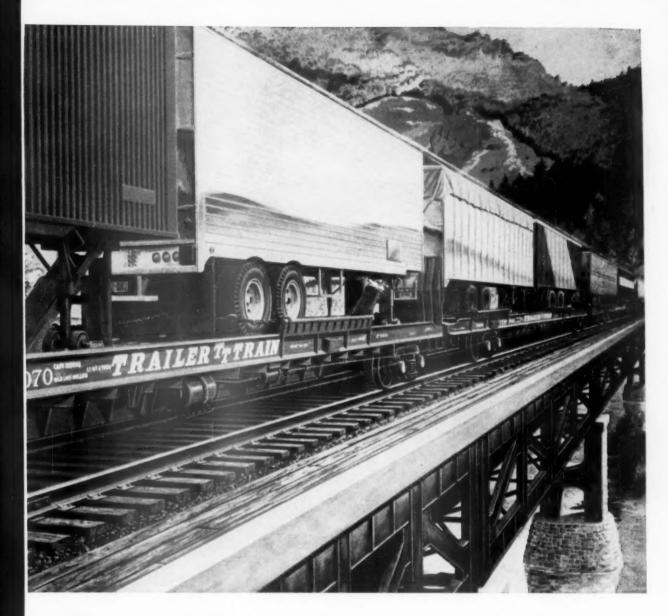
Trailer-Train goes "Roller

It's one thing to schedule a run of over 800 miles per day. It's another to make good on it, and Trailer-Train members can. To make sure of meeting their tight schedules, Trailer-Train cars are 100% on roller bearings. And better than half of these are on Timken® tapered roller bearings.

Trailer-Train made their first purchase of Timken bearing-equipped cars five years ago. The performance was so good they have added more every year until today they have 3,448 cars on Timken heavy-duty "AP" bearings.

With Timken bearings on their axles, Trailer-Train cars can roll hour after hour at passenger train speeds without fear of overheated bearings. Some of these cars cover 168,000 miles a year. And they spend less time in terminals because Timken bearings are inspected quickly.

Today 99 railroads and other freight car owners have over 75,000 cars on Timken bearings in service or on order. Now's the time to make the switch to "Roller Freight"— to give shippers even better service, to cut oper-



Freight" to eliminate delays

ating and maintenance costs. When all freight is "Roller Freight", America's railroads will save an estimated \$288,000,000 annually—about \$144 per car. And shippers will get better freight service than ever. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".



heavy duty

TIMKEN

tapered roller bearings



THAWING PLANT is 225 ft long and has 36 thawing pits. Every third crosstie is omitted to accommodate a cov-

ered pit. Covers fold back when pits are in operation. The plant can thaw up to 10 cars an hour.

Pushbutton Plant to Thaw Coal

The Story at a Glance: Scheduled to go into preliminary operation this spring, the new Charles P. Crane electric-generating plant of the Baltimore Gas & Electric Co. first had to have a 90,000-ton stockpile of coal on hand. This meant stockpiling during the winter when cars of coal arrived in a frozen condition. To make stockpiling possible under these conditions, the utility constructed an oil-fired facility capable of thawing two five-car trains an hour.

Despite one of the worst winters of record, the Baltimore Gas & Electric Company completed the winter stockpiling of coal at its new Charles P. Crane station on schedule. Because of the construction of a new car-thawing facility, stockpiling of about 90,000 tons of coal continued without interruption through the coldest weather of the season.

This amount of coal was necessary because the new electric-generating station is scheduled for commercial operation early in the summer of 1961. The first of the four units planned for this site will go into preliminary operation in the spring and consume about 65 tons of coal per hour under full-load operation.

The Charles P. Crane station is one of two in the Baltimore G&E system

that receive coal directly by rail. In the stockpiling operation the cars were dumped and the coal sent on conveyor belts to the stockpile. Since the cars had to be unloaded and released in a reasonable length of time if demurrage was to be avoided, the thawing operation became necessary during the winter months.

The new car-thawing plant made it possible to thaw up to 10 cars an hour. The facility, 225 ft long, handles five cars at a time. It has 36 prefabricated thawing pits so arranged that any size car, or any combination of sizes in a five-car train, can be thawed effectively without damaging the cars. Each pit





THAWING PITS, with covers removed, become very hot from oil-fired burners (outside of rails) and radiate heat to undersides of cars. Any thawing pit beneath a car section that is vulnerable to damage by heat is not operated.

LOW-PRESSURE BLOWERS along trackside windbreak provide air needed for oil atomization and combustion at the burners. The No. 2 fuel oil is pumped from a powerplant storage tank and reaches the burners through an underground pipeline.

Cars Is Built by Baltimore Utility

radiates heat at the rate of 1.5 million Btu per hr, and the arrangement of the pits makes 6 million Btu per hour available at each car location. For each prefabricated pit installed, a crosstie was omitted from the track, and two ties were installed between pits.

Each pit is lined with refractory brick and is served by two burners with pilot lights and safety equipment. No. 2 fuel oil, pumped from a power-plant storage tank, reaches the burners via underground pipeline. Air, needed for oil atomization and combustion, is provided through ducts by low-pressure air blowers. Hinged, split covers, kept closed when the pits are not in use,

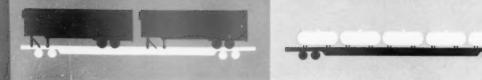
fold back during thawing operations. The burners and controls are protected by individual covers.

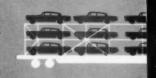
The thawing plant is designed for one-man operation through push-button controls from three panels mounted on a trackside windbreak. However, the pilot lights are ignited manually, after which they remain in service as long as desired. The operator thus obtains an instantaneous response from any pit he may decide to use.

Determining which pits are to be used for thawing depends upon the size of the cars. The operator takes his cue from the lead car, then observes the positions of the cars along the track and proceeds to start by push button those pits that are located under areas to be heated. Any thawing pit beneath a car section vulnerable to damage by heat is not operated.

In the event of a failure of air pressure, fuel or power supply, shut-off is automatic. This feature, plus the remote control, is said practically to eliminate hazard of injury to operators.

The thawing station was designed and engineered cooperatively by Hauck Manufacturing Company, Brooklyn, N. Y., and the Baltimore Gas & Electric Company to meet the specific requirements of the Charles P. Crane station.





what every shipper and railroad should know about ACF's

new idea in piggybacking

ACF's new "Transport Package" is literally a profitable "do-it-yourself" kit for shippers and railroads who transport by piggyback! One remarkably versatile flatcar—the ACF Hitch Hiker—plus ACF-designed attachments—can carry any trailer, any cargo, including autos, with maximum protection and maximum efficiency.

Because of its flexibility in combining with other types of piggyback equipment, and its ability to adapt to new ladings and handling techniques, the ACF "Transport Package" can be the common denominator for all piggyback requirements.

This means you get more mileage from your piggyback fleet—eliminate the chances of premature obsolescence—and reduce maintenance and downtime, because ACF products are production-line built.

ACF's 85' Hitch Hiker (and attachments) . . . no matter what you transport, this is the answer!

What's the load? ACF Hitch Hiker, equipped with ACF Trailer Hitches and ACF Cushion Cradles, handles trailers and containers of all sizes and types, tractors, farm, construction, military vehicles, and other ladings. A single car provides the whole answer, no matter what you piggyback! For greater efficiency ACF cars can be end or side loaded and unloaded equally well.

Rack up savings on auto transport, too: New ACF Auto Rack combines with Hitch Hiker. Tri-level Auto Rack takes 15 compact, 12 standard autos. Second level adjusts upward to accommodate larger vehicles. Bi-level rack also available. Standard ACF cushioning gives superior lading protection.

Problem liquids, problem gases? ACF has the answer, with specialized tanks and trailers that can be piggybacked on the Hitch Hiker. Almost any liquid or gas can be accommodated. Ask your ACF Man!





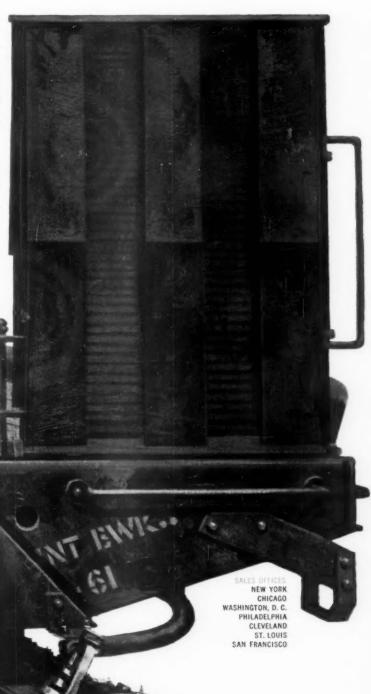
ACF Trailer Hitches and Cushion Cradles are the backbone of Hitch Hiker service

ACF Trailer Hitch: Over 14,000 now in service, because it's the fastest, surest tie-down method available. Provides 40,000 foot pounds of cushioning capacity, allows 22½ inches of horizontal travel. One man completes entire tie-down in less than three minutes.

ACF Cushion Cradies: Help make the Hitch Hiker flatcar the most versatile piggybacker on the road. ACF Cushion Cradles provide cushioning for ladings of 40,000 to 120,000 pounds; allow 15 inches of cushioning travel in either direction. Containers of virtually any length may be carried, as well as other types of equipment requiring multiple-point tie-down.

AMERICAN CAR AND FOUNDRY

Division of QCf Industries, Incorporated 750 Third Avenue, New York 17, N. Y.



RAILROADING AFTER HOURS WITH JIM LYNE

BARLOON AT IT AGAIN—That Professor Barloon from

Western Reserve University, I see by the papers, is again pursuing his avocation of putting his foot on the scales in favor of the railroads' competitors. He recently made a Youngstown speech (reported in that city's 'Vindicator') at a meeting of fearless protagonists of free enterprise, who are aming to shake the taxpayers down for \$1.3 billion to build a waterway for toll-free transportation of the products and raw materials of the staunch capitalistic manufacturers of that area.

The kindly pedagogue, of course, does not wish the railroads any loss of business—no, not he. He said, according to the 'Vindicator,' that he believes the canal would "generate an increased volume of railroad traffic in a wide variety of high-rated commodities." (Not so long ago Mr. Barloon, speaking for trailer people, was opposing rate-making freedom for railroads before a Congressional committee—thereby certainly not helping them any to get the high-rated tonnage he now says will come their way.)

When a teacher at a respected institution takes sides on controversial issues the way this chap does, how come he does so while using his title and connection?

TRACKMAN'S DREAM—I have tried to maintain a firm rule—no pictures (except, occasionally, my own) and no poetry in this space. However,

To the railroad industry from Harry 9. Ortlip*

specialists in electrical engineering and construction for over 40 years

about modernization; capital improvements; and all the hundred-and-one other immediate, urgent, pressing engineering and construction problems and projects vital to the continuous, dynamic growth and progress of the railroads?

SUGGESTION: For almost five decades we have *specialized* in electrical engineering and construction for the railroads and know how to engineer and build profits into projects, cut operating costs, and reduce overhead.

Write me personally—or, your collect call will receive prompt attention—at 50 N. 18th street, Philadelphia 3, Pennsylvania, LOcust 4-4800. what's a rule that cannot be broken on occasion? There follows a choice piece of limpid, tear-jerking verse, sent to me by New York Central's John Nash:

Extra Seven-four-six went into the ditch At the switch there just south of the tower. Put the engine and tank And ten cars down the bank And held up number eight for an hour.

They called us all up on the carpet The G.M. was sore it would seem. Thought they'd give me the walk Till they started to talk Then I knew it was only a dream.

With his hand on the engineer's shoulder The trainmaster said with a sigh. It was not a low joint Or a battered switch point He was taking the "puzzle" in high.

Then the engineer said with conviction, I can prove by the man in the tower When he gave me the ball I was rocking them all And rolling them sixty an hour.

Next spoke the division car foreman As he stepped to the front with a frown: It was not caused by speed, For that gon in the lead Clearly proves 'twas the brake rigging down.

The master mechanic yelled loudly, If you'll let me I'll prove in a jiff, My department's to blame I acknowledge with shame That the engine was rigid and stiff.

I'm not much at visions or dreaming.
It's seldom I sleep on my back
I can side-step and scheme,
But it sure is a dream
When they don't put the blame on the track.

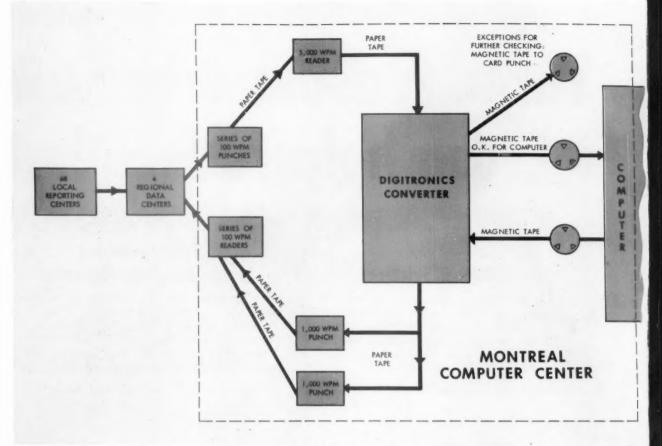
UNDERSTANDING CLERGYMAN—Pastor Alton W. Ferrill of the Ep-

worth Methodist Church, Arlington, Tex., has sent me a copy of a letter he has written to Senator Yarborough, expressing his unhappiness at the bill, S. 1089, the senator has introduced, which would greatly curb the railroads' right to make competitive rates.

"The government has dredged the streams and furnished facilities for the barge lines and other water carriers," writes the Rev. Mr. Ferrill. "The government has borne all the cost—which, in the first place, was a very foolish policy. The least you fellows in Congress could do would be to turn the railroads loose and let them compete without rate restrictions by the Interstate Commerce Commission.

"You will perhaps recall that in 1958 I talked to you in Washington one day relative to more freedom for the railroads, and you promised me you would do your best to help them. On that basis I supported your candidacy."

I wish I had the space to reproduce all of Pastor Ferrill's letter; and I also wish that every railroad man had as thorough an understanding of transportation as he has.



ROUTE OF DATA from 68 local reporting centers into CPR's Montreal computer center is indicated by above drawing.

CPR Speeds Data with Tape

A tri-directional magnetic tape-paper tape converter is speeding the flow of data into and out of Canadian Pacific's Montreal computer center. The converter, which links the road's teletype-writer communications system with the magnetic tape input-output of an IBM Model III computer, has replaced some punched card input-output equipment and methods.

The Digitronics Corporation's tridirectional tape converter converts information received from the field on teletypewriter paper tape to magnetic tape for processing on the high-speed computer. It also converts processed information on magnetic tape to paper tape for relay via Teletype to other offices, and can select information from one reel of magnetic tape and reproduce it on another.

The converter ". . . will provide the facility of paper tape to magnetic tape conversion and vice versa, eliminating

the necessity of entering and leaving the computer installation via punched cards," says E.A. Leslie, CPR's vice president, accounting. The railroad has 68 local reporting centers connected via Teletype to four regional data centers. At these centers, the data is processed for transmission via Teletype and IBM transceiver to the Montreal computer center.

The converter, D106, provides both transverse and longitudinal parity checks. It has two magnetic tape units, one paper tape unit and two memory units. Associated with the converter are two paper tape punches that operate at 1,000 words per minute. The converter can read paper tape and place data on magnetic tape at a rate of 500 characters per second, equivalent to about 5,000 words per minute. When converting from magnetic to paper tape, the unit reads the magnetic tape and feeds data into memory, which

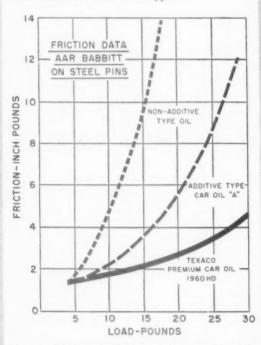
feeds data directly to the paper tape punch. The memory acts as buffer storage, because the converter can read magnetic tape much faster than the paper tape can be punched.

A third function of the converter is to transfer data from magnetic tape to magnetic tape with selective action. Thus, the unit will read one magnetic tape, select certain information and put it on a second reel of magnetic tape. This type of conversion could prove helpful in handling movement data, particularly data about movements of certain types of freight cars. For example, the converter can read train consist tapes and select the data about covered hoppers or DF box cars, and place the movement data on a separate magnetic tape. This selective reading can also be accomplished on the paper tape. Thus, complete selectivity is available from paper to magnetic tape and vice versa.

Three reasons why new can help reduce hot

60% less friction

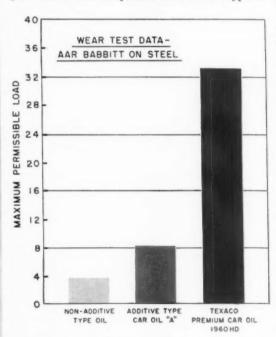
Less friction means lower operating temperatures . . . an important reason why Texaco Car Oil 1960 HD can help cut hot boxes as much as 40%. A special additive gives Car Oil 1960 HD a 60% lower friction coefficient under heavy load than most non-additive type oils.



Lower friction coefficient of Texaco Car Oil 1960 HD graphically illustrated. Car Oil 1960's ability to resist friction becomes even more pronounced as load-pounds are increased. The uniform quality of Texaco Car Oil 1960 HD assures consistently reliable performance.

8 times greater load-carrying capacity

Metal-to-metal contact between journal and bearing, the result of localized high bearing pressure, is a common beginning of hot boxes. Actual tests at Texaco's Research Center prove that Car Oil 1960 HD retains its protective oil film at a pressure 8 times greater than the failure point of a non-additive type oil.



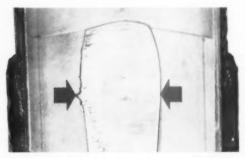
Greater load-carrying capacity of Texaco Car Oil 1960 HD graphically illustrated. Car Oil 1960 HD retains its protective oil film at a laboratory pressure much greater than would be encountered under average operating conditions.

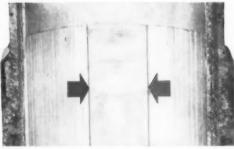
Car Oil 1960 HD can actually prove more economical

Texaco Car Oil 1960 HD boxes as much as 40%

Minimum bearing metal displacement

Scored, worn, and misaligned bearings are also a common cause of hot boxes. Texaco Car Oil 1960 HD has a built-in characteristic that hinders gross bearing metal removal. Instead, Car Oil 1960 HD redistributes minute amounts of babbit...actually assists in reseating the bearing.





Smoother bearings with Texaco Car Oil 1960 HD. Contact areas of above journal bearings were reduced to 9 sq. inches and subjected to identical tests. Serrated edges (arrows) on top bearing, run on non-additive type oil, indicate considerable metal displacement. Straight edges (arrows) on lower bearing, run on Texaco Car Oil 1960 HD, indicate almost no metal displacement.

Savings can reduce car oil costs by 22° a gallon

Five major roads reported up to 40% decreases in hot boxes after switching to Texaco Car Oil 1960 HD. Savings because of reduced hot boxes can more than offset the slight additional cost of premium Texaco Car Oil 1960 HD.

For example: Suppose a road using 200,000 gallons of car oil yearly reduces hot boxes from 1,100 to 660 by switching to Car Oil 1960 HD in all journal boxes—using both summer and winter grades. A minimum saving of \$100 on each eliminated hot box would net this road \$44,000. This sum, if applied to the purchase price of the car oil, would reduce its cost by 22¢ a gallon. Therefore, in real terms, the pergallon-price of Texaco Car Oil 1960 HD is actually about 16¢ less than the price previously paid for the non-additive type oil.

For full details on how Texaco Car Oil 1960 HD and unmatched service can mean fewer hot boxes for your road, call the nearest Texaco Railway Sales Office in New York, Chicago, San Francisco, St. Paul, St. Louis or Atlanta. Or write:

Texaco Inc., Railway Sales Division, 135 East 42nd Street, New York 17, N. Y.

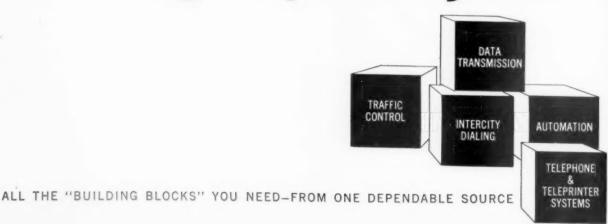
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high-speed system





communications

If your "hot-shot" freight has been getting the cold shoulder unavoidably, Automatic Electric can see that it gets proper attention.

The answer is total communications at high speed. Such a modern electronic system not only keeps continuous tabs on the location and movement of high-priority freight, but speeds up diversions and makes the most of your widely deployed motive power.

Fully compatible with present wire circuits, it provides a completely integrated communications system with vastly increased telephone and teleprinter capacity together with high-speed data transmission and automatic traffic control.

AE can supply everything needed to put the system to work for you. Or team up with your Communications and Signal Superintendents in planning a long-range modernization program that lets you add as you go with assurance of future compatibility.

For full details, phone (FIllmore 5-7111) or write the Director, Railway Sales, Automatic Electric Sales Corporation, Northlake, Illinois.

AUTOMATIC ELECTRIC

Subsidiary of

GENERAL TELEPHONE & ELECTRONICS



C. H. Burgess, Vice President, Operation and Maintenance, Northern Pacific Railway,



with no downtime for floor repair . . .

"This car provided 10 years of

Cars equipped with NAILABLE STEEL FLOORING, like NP 18740, give Northern Pacific two important advantages: They stay in Class A service without downtime for floor repair. And they assure NP shippers of clean, splinter-free cars safe for all kinds of lading.

Today Northern Pacific's fleet of more than 4,000 steel floored boxcars carry rough, blocked, sacked and loose lading safely. No matter what the shipment, NAILABLE STEEL FLOORING makes it possible to move more freight with fewer cars and faster turn-around.

■ Stran-Steel Grain Door Nailers and Stran-Anchor Lining for side and end walls also give additional protection to lading, help keep cars off the rip tracks for repair.

Full information and cost studies are available from Stran-Steel representatives in Chicago, New York, St. Louis, San Francisco, Minneapolis and Richmond. In Canada, N•S•F is made and sold by International Equipment Co., Ltd., Montreal.

STRAN-STEEL CORPORATION, Detroit 29, Michigan.



STRAN-STEEL IS A DIVISION OF NATIONAL STEEL CORPORATION

Class A service for our shippers it's equipped with N·S·F°

UNRETOUCHED PHOTOGRAPH OF NP BOXCAR 18740



(Continued from page 17)

nected to the tractor's 12-volt electrical system, a standard procedure during both loading and unloading of conventional cars. This is one factor responsible for reducing both weight and cost of the new cars. Another is the fact that the van is supported at both ends, which has made it possible to reduce considerably the weight of the center sill. Uneven distribution of the load through the length of the van no longer complicates loading and unloading.

In addition to the 8-in. longitudinal cushioning in each direction—a feature of conventional cars—the Mark III car also provides vertical and lateral cushioning with the additional spring groups incorporated in the turntables. The car has rubber draft gears and roller-bearing trucks. Light weight is 56,000 lb.

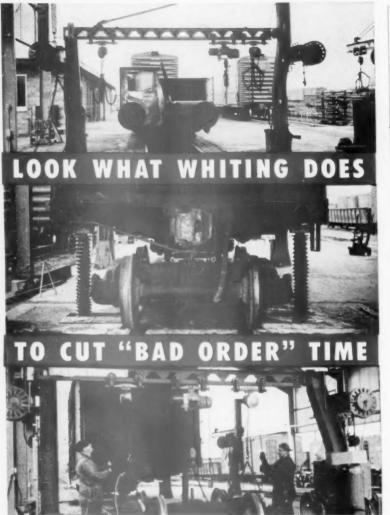
The Mark III cars the NYC is getting have been built by Greenville Steel Car, using Strick Flexi-Van attachments. A Southern Pacific Clejan car was recently fitted with these Strick attachments. The SP car is being tested.

The Flexi-Van attachments, both turntable and kingpin lock, have locks which can be operated automatically or manually. Manual operation permits freeing or securing vans which are being handled by overhead cranes. This is important for the expanding overseas Flexi-Van operations in which the containers are moved directly between ship and railroad cars.

At the Los Angeles demonstration, new "jumbo" Flexi-Van containers were also displayed. They are designed especially for cross-country traffic. Mechanical refrigeration units in the van will carry perishable goods under rigid temperature controls across the continent to Eastern markets. On westbound trips, the vans are adaptable for dry freight transportation. The two jumbo vans demonstrated were especially constructed for the United States Freight Co.

"To have equipment that will allow us to take perishables eastbound, the predominant direction of movement, and yet that can also be used for dry freight westbound is particularly important to us on the railroads," Mr. Perlman said. "The elimination of cross-hauling empty equipment can be a significant factor in transportation economies—and one from which both shipper and railroad can benefit."

Flexi-Van was first introduced by the Central in 1958. Commenting on its rapid growth, Mr. Perlman remarked that during the first year the railroad carried 4,000 containers. Now, that many containers are carried in a single month.



Reading's new Progressive Spot Repair System at Newberry Junction, Pa., saves time and money with three Whiting products.

Whiting Trackmobile provides faster, safer, more economical progression than cable-type pullers, simultaneously pulls a bad order car into position while pushing repaired car to "okay" area.

Whiting Ripjacks are pushbutton controlled to transverse from 6'8" to 9'8" centers, fit all standard car widths, lift one end of loaded car 60" for easy truck removal. Also equipped with lifting beam for jacking cars without pads.

Whiting Trambeam Jib Cranes feature three hoists for holding side frames and bolster of disassembled truck in convenient working position, and are equipped with automatic hose reels for oxygen, acetylene, solvent, oil and air.

FREE—Bulletin RJ-C-101 tells how Whiting helped engineer this time-and-money-saving system—and how it can do the same for you.

Whiting Corporation, 5-0-3 Lathrop Avenue, Harvey, Illinois. In Canada: Whiting Corp. (Canada) Ltd., 350 Alexander Street, Welland, Ontario, Canada.

90 OF AMERICA'S "FIRST HUNDRED" CORPORATIONS ARE WHITING CUSTOMERS

WHITING

MANUFACTURERS OF CRANES; TRAMBEAM HANDLING SYSTEMS; PRESSUREGRIP;
TRACKMOBILES: FOUNDRY, RAILROAD, AND SWENSON CHEMICAL EQUIPMENT



GE Expands Universal Diesel Line

Two universal type diesel-electric locomotives just announced by General Electric now make available a wider selection of power ratings in the GE universal locomotive line, a group of related models first introduced in 1956 (RA, April 16, 1956, p. 47; Nov. 12, 1956, p. 31). Designated the U8B and U5B, the new models are rated at 900 hp and 600 hp, respectively. The U5B becomes the smallest of the universal locomotives. Other models range upward in size and rating to the 2,500hp U25B which GE now offers for domestic service (RA, May 9, 1960, p.32).

All the models smaller than the U25B are designed for service on almost any railroad in the world. They are proportioned to meet the restricted clearances encountered abroad and can be adapted to all types of coupling and braking systems. First order for the U8B locomotive, for the Leopoldina Railway of Brazil, is currently in production at the GE Locomotive & Car Equipment Department at Erie, Pa.

Diesel used on the U8B is a Caterpillar D-398, turbosupercharged V-12, four-stroke, four-cycle engine. The U5B has a Caterpillar D-379 turbosupercharged V-8 engine, also of four-stroke, four-cycle design. Bore of each of these engines is 6½ in. and stroke is 8 in.

All four axles both of the U5B and U8B are powered with GE-761 traction motors. Weight of the U8B is 54.5



BOUND FOR BRAZIL, first U8B stands on GE test track. The 900-hp locomotive, for the Leopoldina Railway, is first of an order for 65 units.

tons and of the U5B, 53.5 tons. Low axle loadings fit both locomotives for use on light rail. The units were designed to bring the advantages of the universal line to smaller railroads and to industries with heavy haulage requirements.

Optional equipment on either locomotive model includes dynamic braking, altitude compensating governor, multiple-unit control, ventilating air filters, speed recorder, extra sanders.

Advantages claimed for the universal line include maximum parts interchangeability due to standardization and easy maintenance and adaptability to varying railroad needs resulting from the simplicity of the design.

Closer Shipper-Carrier Ties Urged

ICC Chairman Everett Hutchinson says shippers who rely on private transportation may not know what they're missing.

Such shippers, Mr. Hutchinson told the American Management Association in New York, may be "unaware of certain services offered by common carriers, as well as the comparative costs of providing their own transportation relative to the costs of purchasing common carrier service.

"In cases where a shipper fails to investigate these comparative costs, unnecessary and undesirable losses of traffic by common carriers occur, as well as needless loss to the shipper."

The ICC chairman also suggested that "common carriers are not always sufficiently aware of the shippers' requirements," and added:

"Mutual understanding with respect

to common problems through closer carrier-shipper relationships would tend to assure that the most suitable forms of transportation are being employed."

Mr. Hutchinson suggested that "more attractive" rates would do much to bring business back to common carriers

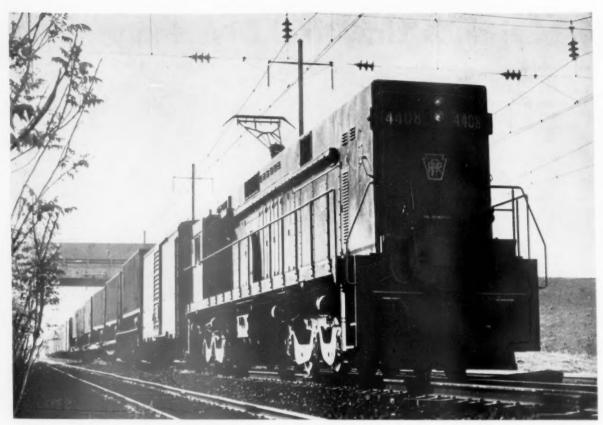
"Despite a number of experiments with rate reductions," he said, "the general level of common carrier rates has been increasing in recent years. In proceedings before the Commission, carriers have justified these increases on the basis of steadily rising costs—that is, a general rise in the level of prices.

"The common carriers, however, have not fully developed a satisfactory basis for pricing their services to reflect their changing competitive position in relation to the entire transport

industry. Shippers have compared costs of providing their own transportation with costs of purchasing transportation and many have concluded, rightly or wrongly, that they would be able to engage in private carriage, service factors considered, at lower costs. In most instances, however, they have continued to rely on common carriers for a portion of their transportation.

"It seems reasonable to believe," Mr. Hutchinson concluded, "that they could, in many instances, be persuaded to return to common carriage for their entire transportation if rates for such carriage were made more attractive."

The commissioner assigned overall responsibility for revitalizing common carriage to "the carriers themselves, the shipping public, the Congress, the ICC, and others having an interest in efficient and orderly distribution."



YANKEE JET, new NH-L&HR-PRR fast freight between Boston and Chicago is shown on inaugural run.

OPERATION SPEED-UP -6

Sixty-mph Limit Set for New Train

Until a new high-speed all-rail route went into service last month, traffic routed between Boston and Chicago via New Haven-PRR had to be floated across the Hudson River at New York. Now, thanks to a new through train iointly operated by the New Haven, Pennsylvania and Lehigh & Hudson River, cars move rail all the way-and in the process cut nearly twenty hours from transit time between Boston and Chicago. Presently a one-way service, the schedule will be revised in the near future to include an eastbound companion train over the same route, making approximately the same time.

Named the "Yankee Jet" (RA, May 22, p. 44), the new train is scheduled out of Boston at 5:30 p.m. It operates over the New Haven to Maybrook, N.Y., the Lehigh & Hudson River to Phillipsburg, N.J., and the Pennsylvania to Chicago. Arrival in Chicago after the 1,262-mile run is in the early hours of

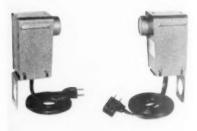
the second morning. Initial runs have arrived "well ahead of time," a PRR officer reports.

"The new Yankee Jet has been established to rush highway trailers on flat cars, merchandise shipments, forwarder freight and other shipments in box cars from New England to Chicago and beyond at a saving of a full business day en route," says Fred Carpi, vice president, sales of the Pennsylvania. "Freight will be delivered in the Chicago area early on the day of arrival, and cars destined to points farther west will make convenient connections the same morning."

Key to the new through route on the PRR, Mr, Carpi says, is the Pennsy's Belvidere-Delaware freight line, which stretches 64 miles along the New Jersey bank of the Delaware River from Belvidere to Trenton. At Trenton, the Belvidere-Delaware line joins PRR's main line to the West and South. At Phillipsburg, the line connects wi'h the Lehigh & Hudson River for the 85-mile run to Maybrook and the New Haven.

"One of the most important developments surrounding this new service is the opening of an additional route for TrucTrain piggyback," Mr. Carpi says. "Heretofore, shipments from New England to the West have moved across New York harbor on a floating transfer from the New Haven in Brooklyn to the Pennsylvania in Jersey City, and the clearance restrictions at the docking facilities made it impossible to move highway trailers on flat cars. The new through all-rail route eliminates that restriction." Mr. Carpi adds. In preparation for the new service, which will operate like PRR's TrucTrains at speeds up to 60-mph, Pennsylvania increased clearances under a number of highway overpasses along the Belvidere-Delaware line, in order to permit highway trailers on flat cars to move without obstruction.

NEW PRODUCTS REPORT





Photorelay (RA-1)

A new photorelay system will switch a 3-amp, 120-volt resistive load. The 8PL2 system consists of a photorelay receiver and matching light source. each 21/2 by 21/2 by 41/2 in, Alinement is easy because each unit can be rotated on its mounting bracket. Both units plug into a standard outlet, and the device controlled, normally off or normally on, plugs into the receiver's plug. Sigma Instruments, Inc., Dept. RA, 170 Pearl St., Braintree 85, Mass.

Fast Tape Handler

A new undirectional tape handler, Dykor model 4544, will handle 500 ft of 5- to 8-level tape interchangeably, at speeds to 50 in. per sec. It is suitable for standard rack mounting and is 101/2 in. high. To load, the tape is placed in the bin on the input side of the reader and threaded through the reader to a servo-controlled take-up spool. To unload, side of take-up spool is removed. tape is slipped off 4-pin hub. Digitronics Corp., Dept. RA, Albertson, N.Y.

Radio Towers

A new line of two-way radio communications towers ranges in height from 10 to 500 ft. Seven models have windload rating of 30 lb per sq ft at a maximum height of 440 ft. A very heavy-duty guyed tower can be raised to 500 ft with 40 psf windload rating. and will support five antennas. The selfsupporting tower has a maximum height of 120 ft and a base of only 8 sq ft. Motorola Inc., Dept. P-128-RA, 4501 W. Augusta Blvd., Chicago 51, Ill.

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NEW PRODUCTS REPORT



Microwave Package (RA-4)

A transistorized microwave package includes RF, multiplex, telegraph carrier and alarm equipment. Operating in the 6.000mc region, the new microwave line is numbered in the 50 series: RF equipment is MR-50; multiplex is MC-50; telegraph carrier is MT-50, and the alarm system is MA-50. As many as 600 subcarrier channels of toll quality voice communications are provided through the MC-50 SSB multiplex equipment. The 600 channels occupy a bandwidth extending from 60 to 2.540 kc, providing 4 kc channel spacing. The fully transistorized MT-50 telegraph carrier equipment provides 18 frequency-shift tone channels over a single voice circuit. Each channel can be operated at signaling rates corresponding to teleprinter speeds of 100 words per minute. The MA-50 alarm system can monitor 22 remote stations for faults with eight points scanned at each station. Motorola Inc., Communications Division, Dept. RA, 4501 W. Augusta Blvd., Chicago 51, Ill.



Standby Power (RA-5)

Typical of the standby power equipment available for microwave stations are Onan models 305CCK and 5CCK electric generating plants. These units produce 3,500 and 5,000 watts with 115/230 volts, 60-cycle, single-phase AC, respectively. Other units in these series produce 230 and 120/208 volts. 60-cycle, 3-phase AC. These units have a 2-cylinder, 4-cycle, 10.2-hp gasoline engine, but options include operation on natural or LP gas. In addition to manual remote starting, line transfer controls are available which make remote starting CCK emergency standby plants fully automatic during power outages. Another option is the Vacu-Flo cooling system, which has a specially designed centrifugal blower to exhaust heated air from the installation compartment and drive it through ducting to the outside. A rugged sheet-metal housing is available for all 305CCK and 5CCK standby power plants equipped with Vacu-Flo cooling system. Onan, Dept. RA, Division of Studebaker-Packard Corp., Minneapolis 14, Minn.

Lifting Magnet (RA-6)

Welded steel construction of the improved Dings Lifting Magnet protects the coil and prevents short-circuits caused by moisture, grounding or hard blows. Light weight provides high lifting capacity to magnet-weight ratio. Exclusive four-point chain suspension reduces swinging and tipping, giving better control over magnet and improved crane action. Dings Magnetic Separator Co., Dept. RA. 4740 W. Electric Ave., Milwaukee 46, Wis.

Optical Page Scanner (RA-7)

An optical alpha-numerical transistorized commercial page reader is available for data processing systems. The page reader scans ordinary business documents and translates them into punched paper tape at the rate of 240 characters per second. It will soon be available with a 340-cps output on magnetic tape. The device automatically reads words and numbers from sheets, tapes and cards. Farrington Mfg. Co., Dept. RA, Needham Heights, Mass.

> June 12, 1961 RAILWAY AGE

Market Outlook

Carloadings Drop 8.2% Below Previous Week's

Loadings of revenue freight in the holiday week ended June 3 totaled 531,267 cars, the Association of American Railroads announced on June 8. This was a decrease of 47,500 cars, or 8.2%, compared with the previous week; a decrease of 43,713 cars, or 7.6%, compared with the corresponding week last year; and a decrease of 149,350 cars, or 21.9%. compared with the equivalent 1959 week.

Loadings of revenue freight for the week ended May 27 totaled 578,767 cars; the summary, compiled by the Car Service Division, AAR, follows:

| For the week | REIGHT C/ ended Sat | arloading urday, May | 27 |
|--|--|--|---|
| District | 1961 | 1960 | 1959 |
| Eastern Allegheny Pocahontas Southern Northwestern Central Western Southwestern | 83,527 93,209 50,898 111,428 82,482 110,404 46,819 | 93,663 112,262 55,708 116,682 103,294 110,455 47,800 | 103,256 131,691 55,322 112,994 113,023 119,230 51,547 |
| Total Western Districts | 239,705 | 261,549 | 283,800 |
| Total All Roads | 578,767 | 639,864 | 687,063 |
| Commodities: Grain and grain products Livestock Coal Coke Forest Products Ore Merchandise I.c.I. Miscellaneous | 50,671 3,526 103,829 6,609 37,264 42,417 29,052 305,399 | 45,431 4,596 109,771 7,865 39,507 73,177 36,297 323,220 | 49,984 5,069 110,713 11,101 41,382 76,651 41,815 350,348 |
| May 27 May 20 May 13 May 6 April 29 | 578,767 568,457 551,405 543,544 544,356 | 639,864 636,853 640,005 641,800 643,328 | 687,063 686,152 692,996 678,160 676,194 |

Cumulative total, 21 weeks ...10,731,464 12,627,419 12,881,753

PIGGYBACK CARLOADINGS .-

U. S. piggyback loadings for the week ended May 27 totaled 11,831 cars, compared with 11,560 for the corresponding 1960 week. Loadings for 1960 up to May 27 totaled 227,658 cars, compared with 221,624 for the corresponding period of 1960.

IN CANADA. - Carloadings for the seven-day period ended May 21 totaled 71,938 cars, compared with 71,163 for the previous seven-day period, according to the Dominion Bureau of Statistics.

| | | Revenue Cars Loaded | Total Cars Rec'd from Connections |
|--------------------|------|---------------------------|---|
| May 21, May 21, | 1961 | 71,938 78,836 | 23,366 26,423 |
| May 21, | | 1,217,181 | 497,159 |

New Equipment

FREIGHT TRAIN CARS

- ► Norfolk & Western.—Purchased 50 70-ton, 3,215-cu-ft-capacity covered hopper cars from Pullman-Standard at a cost of more than \$500,000.
- ▶ Phillips Petroleum Co.—Has ordered 50 30,300-gal. tank cars from General American. General American is also building ten more of these high capacity cars for lease to other shippers.
- ► Union Pacific.—Ordered 1,100 freight cars costing \$14,900,000. Included are 500 40-ft, 50-ton box cars with plug doors; 200 50-ft box cars with plug doors; 200 50-ft box cars with standard double doors; and 200 50-ft, 70-ton insulated box cars equipped with selfcontained load-securing devices. The cars will be built in UP's Omaha shops with delivery scheduled for the remainder of this year and early 1962.
- ▶ Bad Order Ratio 2.0% Higher Than Last Year.—Class I roads on May 1 owned 1,645,547 freight cars. 28,709 less than last year, according to AAR report summarized below; bad order ratio was 2.0% higher than on May 1, 1960.

| | May 1, 1961 | May 1, 1960 | Change |
|-----------------|-------------|-------------|---------|
| Car Ownership | 1,645,547 | 1,674,256 | -28,709 |
| Waiting repairs | 159,778 | 129,533 | +30,245 |
| Repair ratio | 9.7% | 7.7% | - 2.0% |

PASSENGER-TRAIN CARS

- ► New York City Transit Authority.—Is inquiring for 220 new subway cars to be placed in service on the IRT line. Reportedly, bids will be sought on an additional 300 cars next fall.
- ► Philadelphia Passenger Service Improvement Corp.—Builders who have been asked to bid on the supply of 26 commuter cars for the PSIC (RA, May 22, p. 39) have also been requested to furnish costs for up to 30 more cars, provided additional funds are available in 1961-62. Specifications call for placing the new air-conditioned, stainless-steel cars in service within 15 months after the award of a contract. Cars will be purchased with public funds as part of a citysponsored rail modernization plan. The city will lease the equipment to the Pennsylvania and Reading.

LOCOMOTIVES

Norfolk & Western.—Ordered 30 new diesel units—24 from EMD and six from Alco-at a cost of more than \$5,750,000. Deliveries are expected to be completed by August. The 24 units to be acquired from EMD will be GP-18, 1,800-hp, all-purpose road switchers. The six units to be furnished by Alco are RS-11, 1,800-hp road switchers. New acquisitions will bring N&W's total diesel fleet to 561 units.

FOREIGN

➤ Pakistan.—Ministry of Railways and Communications invites bids until July 3 for supply of 475 broad-gage (5-ft 6-in.) freight cars.

Emphasis on Speed

To tell the Operating Department's story, a series of "Operation Speed-Up" articles was begun earlier this year. No. 6 of the series tells about the new "Yankee Jet" Boston-Chicago freight service. It is on page 36.

These one-page features illustrate how new services, facilities, or techniques will improve schedules for the shippers or reduce operating costs for the railroads. We expect to run 20 or 30 of these features this year. The five covered so far have told about a CPR passenger piggyback operation (Feb. 13); a coast-to-coast REA container operation (Feb. 20); a WM-P&WV interchange speed-up (April 3); a freight terminal modernization on the NYC (April 10); and a fast turnover for high utilization of Slumbercoaches by the CB&Q-NP (May 16).

There are probably more of these operation revamps going on than railroad men themselves realize. Drop us a line if you know of instances where operating districts have been changed, roads have set up joint or pool operations, lines or routes

have been changed, train radio has speeded schedules, turnarounds have been accelerated, rules adjustments have been negotiated to permit service improvements, etc.

Maybe because operating men are modest or maybe because improvements are routine, things like these don't always reach Railway Age's editorial ears (there are 48 of them -two for each editor-always tuned

Incidentally, I hope you will like the new idea introduced on page 41 this week. It is "Transport Trends", but might more accurately be called: "Tips on what the competition is up to now." We believe all railroaders will be in a better position to compete if they know more about what their competitors are doing. So we are beginning this new column to provide a time-saver run-down on

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to plan in terms of long-range future conditions."

The program does not contemplate a unilateral undertaking by Commerce. The department does not plan to supplant other federal agencies concerned with transport matters, Mr. Martin

"Rather," he explained, "the department expects to supplement the work of individual agencies, with their cooperation, and to enable the agencies to direct their programs within the framework of overall national objec-

One phase of the department's approach contemplates development of plans for a 1963 census of transportation. Mr. Martin called this an attack on "the deficiencies in transportation data." Despite federal reporting requirements, he continued, "all major transportation studies have found basic traffic and cost data deficient."

To illustrate the "urgency" with which the department views its transport responsibilities, Mr. Martin said its work is well along on "a tentative action program on surface transportation for the consideration of other agencies and ultimately by the President."

Before June 30," the undersecretary added, "we will have taken steps aimed at improving highway safety and at experimenting with methods to increase the capacity of the nation's highways. By June 30, several other efforts will be well under way and the balance will be ready for action on July 1."

Martin Outlines Transport Goals

Plans of the Department of Commerce to assume a more aggressive role as the President's "principal adviser on transportation matters" have been outlined by the department's undersecretary for transportation-Clarence D. Martin. Jr. He told a House appropriations subcommittee that there will be a change from the past when, as he put it, there was "no serious or continuing effort by the department to discharge the responsibility assigned by law to develop overall transportation policy."

Commerce Department transport studies of the past, including that made last year under the direction of former Secretary of Commerce Mueller (RA. May 21, 1960, p. 31), were "abortive efforts" which brought forth no overall transport policy, Mr. Martin said. The Mueller study, he also said, "brushed

over everything very lightly.'

Of the plan to tie transport policy to "the overall goals of society," the Martin statement had this to say: "The failure to consider the overall impact and importance of transport can be directly correlated with unemployment patterns in West Virginia (rail decline). in Western Maryland and in California and Washington State air-frame centers and elsewhere-and indirectly to unemployment in Detroit and the steel centers. City slums, the highway death

rate, the urban sprawl, air contamination, airport noise, and other evils of our times are all attributable in part to the lack of transportation planning."

His office's work "is not to be a further series of studies," Mr. Martin also said, adding: "Rather it will translate the intensive and expensive studies of recent years . . . into action programs.

Meanwhile, "some additional studies will be necessary, to cover gaps in earlier studies and to meet the need for an overall systems approach (as opposed to the modal approach generally followed previously)." The "systems approach" contemplates dealing specifically with these matters:

"A declining, undermaintained, and outmoded rail system operating excessive capacity.

"A highway transport system for passengers and freight in chaos.

"An air system operating on the slimmest profits.

"A maritime industry unable to compete, seeking more and more federal assistance."

The systems approach, Mr. Martin added, "will be completely new to federal policymaking, designed to adapt federal policies to encourage more economical systems, to rationalize conflicting federal subsidy programs, and

P-S Lo-Dek Car Makes No-Impact Test Run

A Pullman-Standard Lo-Dek flat car equipped with dual 20-inch hydraulic cushion cylinders and Dana Corporation tri-level auto racks has completed a 2.670-mile test run-without a single recorded impact on the load.

The car, loaded with 12 standardsize automobiles (valued at more than \$80,000), made its no-impact run between Detroit and Pico Rivera, Calif. Inspection at Pico Rivera of an impact recorder mounted on the cushion rack, P-S reported, "showed that no impacts heavy enough to record had reached the load."

Earlier this year, comparison impact tests-using 10 and 20 inches of cushion travel-were conducted at Pullman-Standard's research and development laboratories (RA, Feb. 13, p. 43). Tests demonstrated, P-S said, that "greatly reduced stresses were indicated when 20 inches of cushioning was employed and showed the desirability of this increased cushion travel for the protection of automobiles in transit."



INCREASED DIAMETER of tank between trucks made it possible to reduce overall length of high-capacity car.

Phillips Buys 30,300-Gal. Tank Cars

A 30,300-gal. tank car breaking many design precedents has just been delivered to Phillips Petroleum Co. by General American. The car, first of 10 built and offered for lease, is to be followed by 50 which Phillips will purchase.

Phillips plans to use the high-capacity cars to move liquefied petroleum gas and anhydrous ammonia between manufacturing plants and its large storage points. Use of these cars will permit greater speed and flexibility in delivery of products in comparison with smaller tank cars, barges, and, in some cases, pipelines, Phillips officers said. "This breakthrough in design," said Spencer D. Moseley, General American's president, "opens up new possibilities for both shippers and railroads."

The car's 66-ft length, according to Mr. Moseley, gives greater maneuverability for negotiating curves and crossovers in refineries, plants, and yards. The car can also be more readily spotted at loading sites and industrial plants. It is 19 ft shorter than other large-sized tank cars. The tank is level across the top, except for a conventional pressure dome. However, the tank increases from a diameter of 99 in, at each end to 118 in, at the midriff.

In its construction, General American's design engineers eliminated the conventional underframe, utilizing the tank as the longitudinal structural member which takes the stresses of buff and draft. Exhaustive testing of the design proved it could withstand these stresses as well as conventional tank cars with center sills.

"The design offers flexibility in that we can vary the capacity of cars we build in the future simply by varying the length of center sections," Mr. Mosely commented. This car is the largest which can be built on fourwheel trucks, but even larger cars can be built with six-wheel trucks,

The bulge in the tank makes it necessary to equip each truck with a separate airbrake system. The normal arrangement with only one air-brake valve and cylinder at the center of the car could not be used because the bulge prevents installation of brake rods from such a central point.

TRANSPORT TRENDS

WATERWAYS: Republic Steel reportedly will move most of its Liberian ore tonnage (estimated 200,000-300,000 tons this summer) via the Seaway rather than through Baltimore by rail. . . . Georgia plans to spend \$16 million to expand inland and deep-water port facilities. . . . Sen. Allen J. Ellender (D.-La.) predicts waterway traffic will double by 1981, triple by the year 2,000. He advocates doubling federal waterway outlays in next 20 years but sees user charges as "major threat to navigation."

AIRLINES: Flying Tiger will put CL-44 jet-prop swing-tail (end-loading) all-cargo planes into domestic transcontinental service Oct. 1. Planes will carry 65,000 lb of payload at 400 mph. . . . Daily flights have been inaugurated by San Francisco and Oakland Helicopter Airlines between airports of the two cities and downtown heliports. Present 30 flights daily are to be doubled June 15. . . . FAA is considering making a \$25-million study to find out if a 2,000-mph commercial airliner is practical.

HIGHWAYS: The Senate Public Works Committee has okayed House-approved legislation authorizing an additional federal outlay of \$11.5 billion to complete the 41,000-mile interstate highway network by its 1972 target date. This would boost program cost to \$41 billion. . . . As more miles of the interstate program are completed, there is growing pressure to permit use of variations of the "Turnpike Train" idea. One of the latest of these—Wolfwagon—puts a cab, engine and MU controls on each trailer.

Computer Dispatching Role Aired

► The Story at a Glance: Computer usage to improve train dispatching and operation was described in papers presented at the American Institute of Electrical Engineers' Land Transportation Committee conference last week in Cleveland, Ohio.

R. S. Gillett of General Electric told how computers may be used to predict train meets. In rapid transit, he said, there's "even greater potential justification" for using computers as dispatcher aids.

Railroads have made considerable use of digital computers, particularly in the area of accounting. These "electronic brains" might well be used also as practical aids in the operating department, specifically in train dispatching. How this would be done was explained to AIEE conferees in Cleveland last week by R. S. Gillett of General Electric's computer department.

"One of the problems with which a railroad dispatcher is faced, even with centralized traffic control, is the prediction or forecasting of when train meets will occur and what action to take in each case. A computer could display or otherwise inform the dispatcher when two specific trains would be expected to meet. Since he already has the means for addressing each section of the system under his control, probably all that would be required would be for him to ask when a train in a particular section would be expected to meet the first train in the opposing direction. This information could then be displayed visually under control of the computer. The inputs to this system would be the information already transmitted to the CTC board and the computer would determine when the meet would occur. employing an extrapolation technique applied to the speed-distance relationship already observed on the trains.

"However, this computational technique is at best a poor one and certainly could be improved by entering into the computer such information as the tractive effort and train load for the several trains involved. From this data, and information concerning grades and curves and other right-of-way data previously stored in the computer, it would be possible to compute the meet information more accurately and farther in advance than would be possible in the first instance.

"If the data concerning tractive effort and train load is entered, as discussed in the latter case, there is probably more information which can be squeezed out of the input data. As soon as the train

enters the system, we can compute a complete tentative schedule of its movements through the system. From this data, it would be possible to determine in advance meets with other trains already in the system. By this means, the dispatcher could make more intelligent decisions as to which trains should be delayed and where.

"Further, the dispatcher could interrogate the computer to elicit information concerning what times exist for any particular section which is free of any trains, so that non-scheduled work trains [or track gangs] can be placed in the system with the minimum amount of difficulty. Perhaps a better way of handling this latter function of scheduling maintenance operations would be to input to the computer the maintenance requirements by section and it could then generate a printed record of all available time for maintenance of each section. . . .

"In the rapid transit area, where the time scale of events is much faster, I believe that there is even greater potential justification for the use of a computer to assist the dispatcher. It has been already proposed that some of the modern rapid transit systems operate with headways as short as 90 seconds," Mr. Gillett stated.

"One aspect of the dispatching function in a rapid transit system, which up until now has received very little attention, is a means for achieving better response of the system to short term variations in passenger load. While it is possible to pre-compute schedules for normal rush hour traffic, both morning and evening, normal operations during the day, holiday and weekend schedules, one of the basic problems with which the dispatchers are faced is the response to short term variations from the expected traffic load. One possibility in a system where a computer is employed might be to measure continually the passenger load waiting for each train at each station. This might be accomplished, for example, by entering data from the turnstile counters directly into the dispatching computer and then instructing the computer how to modify the standard schedule to meet the variations of traffic load.

"This problem relates very closely to the maintenance of the proper spacing between trains. This occurs, for example, when one train on a line has a mechanical failure which causes it to run slower than its schedule. What happens is obvious; the number of passengers waiting at the stations in advance of the slow train increases and,

therefore, the slow train is further slowed because of the number of passengers entering or leaving that train. A further effect of this problem is that the units traveling behind the slow train will be traveling almost empty. The problem, then, is to achieve a more equitable spacing between units. This can be accomplished by artificially stretching the schedule of the units preceding the slow one to divide the intervals between these trains more evenly. Also, it is generally desirable to slow down a number of succeeding units following the slow one to distribute the passenger load more equitably. In some cases, where situations like this are recognized soon enough, one possible solution may be to have a succeeding unit 'leap frog' the slow one and thereby take up its schedule. . . .

"The point," Mr. Gillett said, "is that in order to achieve more efficient operation of a rapid transit system, the dispatching function must be expanded in order to achieve closer supervision of the system. This implies that more information concerning the operation of the system will be required. Information concerning such external conditions as passenger load and weather conditions will also be required. All of this implies that some assistance must be given to the dispatcher to enable him to effectively utilize the greater information presented to him and to enable him to supervise the system in a more efficient manner. . . .

The digital computer can do this job of automatically assimilating and processing the greater amount of information necessary for this rapid transit operation. He said that the computer "can then present this processed information to the dispatcher, thereby permitting him to exercise the decision-making capabilities which is his principal function."

Application of digital computers was also discussed by J. L. Gable, Milwaukee Road. Automatic train operation topics at the AIEE meeting ranged from New York City Transit Authority's automated subway train, as described by R. G. Welch, to a survey of recent trends in this field by L. R. Allison, Union Switch & Signal. French efforts in remote control of trains and vard engines were described by D. M. Sher. French National Railroads. G. H. Hiner and E. H. Abbe, General Electric, described a new system of automated mail handling at railroad terminals. W. H. Chase, Ohio Bell Telephone, discussed the role of the engineer in automation.



H. Preston Henshaw C&O



Lawrence J. Logsdon



S. L. Williams WABCo



Fred W. Genger National Malleable

TEXAS & PACIFIC.—William R. McDowell, general counsel, elected vice president and general counsel. Guy E. Donce, assistant to general auditor, elected general auditor, to succeed Dwight B. Ohrum, named budget director.

Supply Trade

S. L. Williams, assistant to the general manager, Air Brake Division, Westinghouse Air Brake Co., has been elected also president and general manager, Railroad Friction Products Corp. and Cobra Friction Products, 1td., Canada. Both companies are jointly owned by WABCo and Johns-Manville Corp.

Fred W. Genger has been appointed sales manager, New York office, Transportation Products Division, Notional Malleable & Steel Costings Co., succeeding Donald F. Kittredge, recently appointed assistant vice president, international Division (RA, May 29, p. 74).

OBITUARY

Col. Roy Borton White, 77, honorary chairman of the board, Bultimore & Ohio, and former president and board chairman, died June 3 at his home in Baltimore, following a brief illness.

M. F. Anderson, general superintendent signals and communications, Chesapeake & Ohio, died June 6 at Richmond, Va.

Korl F. Nystrom, 79, retired chief mechanical officer, Milwoukse, died June 5 in Evanston Hospital, Evanston, Ill.

PEOPLE IN THE NEWS

CHESAPEAKE & OHIO.—Royal C. Riedinger, general coal traffic manager, appointed assistant to president, Cleveland, with responsibility for research in coal marketing and special coal studies. H. Preston Henshaw, special assistant, office of vice president—coal traffic and development, Cleveland, named coal traffic manager in charge of the coal traffic department at that point.

CHICAGO GREAT WESTERN.-G. l. Schwob appointed assistant vice president, freight-sales and service, and E. J. Forster, named assistant vice president, freight-rates and divisions, both at Chicago. H. D. Goodwin named assistant vice president, industrial development, Kansas City, Mo.

GULF, MOBILE & OHIO.—C. W. Each, assistant general superintendent motive power and car equipment, appointed chief mechanical officer, Mobile, Ala., succeeding Charles M. House, general superintendent motive power and car equipment, retired.

MISSOURI, KANSAS & TEXAS TRANSPORTA-TION CO.—William H. Wiley appointed general manager, Dallas, Tex.. succeeding Clyde E. Buckley, retired.

MISSOURI PACIFIC.-C. J. Mourer appointed assistant to vice president-finance.

C. I. Shelton, personnel officer, St. Louis, appointed assistant chief personnel officer there, succeeding R. P. Love, retired. V. E. Honika replaces Mr. Shelton. T. J. Dornoll, C. C. Courtwoy and L. O. Mash named special assistants-personnel, St. Louis.

L. Ray Goodwin named industrial agent, Houston, Tex., replacing W. C. Murph, retired.

PENNSYLVANIA.—Lowrence J. Logsdon, district sales manager, Philadelphia, Pa., appointed manager of freight sales and services, New York region, succeeding William F. Hoogland, promoted to sales manager. Southwestern States, St. Louis. Mr. Hoogland succeeds E. W. Fisher, retired. Thomas K. Turner, district sales manager. Seattle. Wash., succeeds Mr. Logsdon.

F. H. McNamor appointed supervisor of communications and signals, Canton, Ohio, J. E. Lust appointed assistant supervisor, TrucTrain, Chicago.

PHILADELPHIA TRANSPORTATION CO.—Albort G. Lyons, operations manager, Boston Metropolitan Transit Authority and former maintenance expert on the staffs of the New York Transit Authority and Philadelphia Transportation Co., has returned to PTC

as head of the construction and maintenance activities.

SOUTHERN PACIFIC.-W. F. Settle named special assistant, office of president, San Francisco.

J. W. McLaughlin, district master car repairer, Los Angeles, appointed general master car repairer, San Francisco.

Howard J. Carroll, secretary, retires June

Worren T. Jensen named assistant manager of personnel, San Francisco, replacing G. L. Noylor, appointed carrier member, Third Division. National Railroad Adjustment Board (RA, June 5, p. 39).



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You Ought To Know...

- First of the Milwaukee's bi-level commuter cars will go on display June 15 at Chicago Union Station and June 16-17 at various points on the road's west and north suburban lines. Bi-level train operation will begin June 19. Forty 160-seat coaches are on order from Budd and will be placed in service as received throughout the summer. Final deliveries on the \$7-million order are expected shortly after Labor Day.
- Pacific Northern Railway has received from the British Columbia government an extension of its construction deadline. The extension, however, is conditional on agreement by the company either to let firm contracts by Nov. 1 for clearing of the first 100 miles or to give a firm undertaking for construction of a longer section to be started by June 1, 1962.
- Rail union leaders who called on Undersecretary of Commerce for Transportation C. D. Martin to protest the growing merger trend "didn't get much satisfaction," BLE Grand Chief Roy E. Davidson told engineers. What's needed, said Mr. Davidson, is a "real breathing spell" to study pending merger proposals.
- Stepping up its campaign for public support for the proposed C&O-B&O affiliation, C&O is giving wide distribution to a brochure which says the plan is "in the public interest because it will unite a stronger and a weaker eastern railroad." ICC hearings on the proposal are scheduled to begin June 19.
- Traffic pickup in May gave C&O a net income of \$2.2 million—best for any month so far this year. Biggest increase was in coal loadings, which were 28% ahead of April.

- Lowest first-quarter net railway operating income in 40 years-"with the exception of 1938"-was registered this year (\$23 million), AAR Vice President J. Elmer Monroe told an Emergency Board holding hearings on the Yardmasters wage-rules case. Mr. Monroe, director of AAR's Bureau of Railway Economics, blamed "intense competition from governmentaided methods of transportation." He also said the total compensation paid railroad employees has risen by 91.7% from 1929 to 1960.
- Evans Products Co. "categorically denies" restraint-of-trade charges made by Sparton Corp. in a federal-court civil action (RA, June 5, p. 40). Meanwhile, Evans has announced it will ask for damages from Sparton in its own suit claiming infringement of two Evans loading-equipment patents by Sparton's Easy-Loader.
- For the tenth consecutive year, Santa Fe will send a middle-management group back to school (University of Southern California) for an intensive six-week seminar, the Institute of Business Economics. This year's 32-man class will start sessions June 19. Santa Fe personnel will attend lectures daily and participate in discussions about the fundamental economic, social and political concepts of the free enterprise system. Supplementary training will cover elements of public speaking and conference leadership.
- The \$500,000 cost to install 25 miles of CTC will be shared by the Pennsylvania and New York Central. This will provide improved operations between Davis Tower (Indianapolis) and Lebanon, Ind. Trains of both roads operate over this section and the one siding at Burr has been lengthened to handle 150-car trains.
- Swiss Railways will use a new high speed data processing system— an IBM 7070/1041 combination—to improve management functions through immediate availability of data; increase car utilization; and perform administrative chores such as computing freight charges, compiling statistics and invoicing.

- Permitting railroads to enter the waterway business would be like letting "foxes into the henhouse," A. C. Ingersoll, Jr., president of Federal Barge Lines, told the Midwest Transportation Institute at Minneapolis. He noted with satisfaction that Congress "doesn't seem to be in a mood" to change the law barring railroad control of competing water carriers. But, he said, "under the present law two separate applications are pending in which railroads are seeking special permission to own barge lines. We hope the Interstate Commerce Commission will not let the foxes in through the window, for the effect on the hens would be the same."
- Better ways to protect the public from missiles in transport are urgently needed, P. H. Strietzel of Aerojet-General Corp. told the National Fire Protection Association's 65th annual conference. Mr. Streitzel said that rocket motors used in missiles and their solid fuel propellants have increased so rapidly in size that they have outgrown all existing ICC and military specifications controlling safe shipping procedures.
- A new "uniform" format to be used by surface transportation companies in filing tenders of freight rates on government shipments has been announced by the Military Traffic Management Agency. Tenders prepared in accordance with the new format will be made to the U.S. government unlike old tenders, which were submitted for the account of one or more of the military departments. A carrier now must also certify that required copies of the tender are being filed with the ICC or other appropriate regulatory agencies.
- IC President Wayne A. Johnston called for "more effective driver training and real enforcement of laws governing vehicle stops at railroad crossings" following an ICC investigation in which it was found that a tank-truck failed to stop in compliance with a state law and drove "onto a rail-highway crossing immediately in front of" IC's "City of New Orleans" causing the tragic crash which took eight lives last January 17, at Magnolia, Miss.

Advertisers' Index

| American Car & Foundry | 25 | |
|---|-----|--|
| American Oil Company | 8 | |
| Automatic Electric Sales Corporation 30, | 31 | |
| Bendix Corporation, The | 3 | |
| Classified Advertisements | 45 | |
| General Electric Company Locomotives & Car Equipment Division | 1/1 | |
| Greenville Steel Car Company | 45 | |
| Hunt Company, Robert W | 45 | |
| McPherson, J. D. | 45 | |
| Mobil Oil Company | 19 | |
| | 43 | |
| National Malleable & Steel Castings Company Inside Back Co | | |
| | | |
| Nelson Iron Works, Inc. | 45 | |
| Ortlip Company, Harry F | 26 | |
| P & M Company Back Co | ver | |
| Pittsburgh Plate Glass Company Industrial Paint Division | 6 | |
| Standard Car Truck Company | ver | |
| Stran-Steel Corporation | 33 | |
| Texaco, Inc | 29 | |
| Timken Roller Bearing Company, The 20, | 21 | |
| Trailmobile, Inc. | 4 | |
| Weiss Company, B. M. | 45 | |
| Whiting Corporation | 34 | |
| | | |

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3 Goals for4 Freedoms

Railroads are asking for four kinds of governmental action* to enable them to grow and prosper and, hence, provide the quality and economy of transportation service that the public needs.

Favorable governmental action on this railroad program would not, of itself, however, restore well-being to the railroad industry. The initiative in rebuilding railroad traffic and earnings has to come from railroads themselves. A favorable governmental environment is to the railroad industry what a well-balanced diet would be to an athlete—necessary to his successful performance, but still leaving the hard work as a responsibility of the contestant himself.

There have occurred many changes in this country's patterns of transportation in the past thirty years, especially since World War II. As yet, railroads have imperfectly adapted themselves to these changes. Adverse governmental action has made this adaptation difficult—but has not precluded it.

There have been many statistical studies and interpretations of the changing character and methods of freight movement. One recent and rather comprehensive summary appears in the volume "Transportation Design Considerations" just published by the National Academy of Sciences. The author of this particular paper is Benjamin Chinitz, who has spent the past several years in the study and analysis of transportation and commodity distribution. He points out that the large decrease in transportation costs relative to other production costs in the nineteenth century (as a result of the coming of the railroads) gave rise to "regional specialization" in production (i.e., one or two centers of production of a commodity, with nation-wide distribution).

This condition, he finds, is rapidly changing. Regional self-sufficiency is on the increase. There is occurring a great increase in more highly fabricated products, in ratio to total tonnage.

There is another trend of vital importance to the railroads—i.e., the diversion of bulk commodities to subsidized water carriers (and the threat of their movement by pipelines). The upshot of all these changes is that railroad freight traffic in low-rate (but, nevertheless, usually profitable) traffic in bulk commodities is being eroded by water carriers and threatened by pipeline; and that manufactured

commodities (which are rapidly increasing in relative importance) are being diverted to trucks (including private carriage).

Favorable action by government on the "four freedoms" would be immeasurably helpful to railroads in adapting themselves to these changing traffic patterns—but these "freedoms" would not, by themselves, bring about the necessary adaptation. That adaptation can come only from the railroads, and certainly must embrace at least the following three steps:

• Contrive changes in operating practices and equipment which will enable railroads to provide large-volume movement at lower rates, but without lower profit margins—thus reducing the temptation of producers and receivers of bulk commodities to divert their tonnage away from railroads. This would also permit railroads to offer attractive "quantity" rates to points not located on navigable streams, as well as to points served by barge operators.

 Accelerate the extension of piggyback and container service, and other service (such as "capacity carload" rates on manufactured commodities designed to be attractive to warehouse handling).
 This action should reverse the adverse trend of tonnage of high-valued goods away from railroads.

• Intensify rate reform to get rid of all rates which serve no purpose whatever in attracting traffic to railroads—but whose sole effect is to show a misleading high price for railroad movement, thereby tempting shippers to use it as a justification for engaging in private transportation. Such "paper rates" also establish a convenient "umbrella" for motor carrier rates. The present system of railroad class rates is anti-economic and should be discarded.

In addition, railroads need to accelerate and intensify their efforts to reduce costs (through mergers, abandonment of trackage that doesn't pay its keep, reform of obsolete working rules). And to pass on a part of every dollar thus saved to customers, in the form of reduced charges or improved service.

BEST ARGUMENT FOR "4 FREEDOMS"

If railroads were to develop such a program as this—to rebuild their traffic and earnings, while improving service and providing rate economies to shippers and consequent improved job opportunities for employees, they would be providing the best possible justification and argument for their "four freedoms" project.

The foregoing suggestions are no Cloud 9 idea. All parts of this program are already making progress within the railroad industry. What's needed is for railroad leaders to emphasize the few main points to be included in an adequately comprehensive program; and then to concentrate upon such a program to the exclusion of the scores of less important side-issues, which too often tend to monopolize precious managerial time.

^{*}The AAR "Magna Carta" program, with its "four freedoms" (i.e., from discriminatory regulation and taxes and from subsidized competition, plus the right to diversify).

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